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Universities: A Comparative and Baseline Statistical Report

Prepared by:

A. L. ZEMRAU
Budget Bureau
Nov. - Dec. 1970

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FOREWORD

This report was prepared at the request of the Hon. R. Clark, Minister of Education. It focuses on basic statistical information concerning Canadian universities and provinces, with particular attention being paid to the Alberta university system. It is not a critical analysis, rather a comparative and baseline statistical report.

I would like to extend my appreciation to the Alberta Universities Commission, The University of Alberta Institute of Research, and to the Education Division of the Dominion Bureau of Statistics for providing much of the data found in this report, some of which is confidential and as yet unpublished. And to Mr. A. D. O'Brien, Director of the Budget Bureau, Mrs. M. Taylor, and Mr. R. Rozenhart, also members of the Budget Bureau, for their comments and assistance throughout the preparation of this report. I would like to extend my sincerest thanks to the numerous other people throughout the country who contributed to the preparation of this report.

The writer takes sole responsibility for any errors or omissions contained herein.

A. L. ZEMRAU
Budget Bureau
December 1970

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Introduction

This comparative and baseline statistical report, prepared approximately over a two month period, was designed to assimilate basic data which would provide useful input to decisions made by the Alberta Minister of Education and the Provincial Cabinet.

An attempt is made at this time to introduce only basic or "primary" data pertinent to political and policy decisions related to the Alberta university system. I am not presumptious enough to think that this report contains all the details, and all the data available; rather it contains, in my view, the highlights and more basic and pressing issues.

Concern over the amount of public funds presently being expended on university education has increased tremendously. Traditional approaches to education and the resulting benefits to the individual and society are being re-examined. The tone of such alterations in philosophy is reflected dramatically in the Seventh Annual Review of the Economic Council of Canada.

As Dr. M. Wisenthal, director of the education division of the Dominion Bureau of Statistics, points out: "education is Canada's biggest industry". Per capita education costs have tripled since 1961 and now absorb 20 cents of every tax dollar from all sources. These costs amount at present to 8.5 per cent of gross national production. He goes on to say that, "in 1969-70 it cost nearly $3,600 to educate a student at university for one year, and by 1980 it is entirely possible that the cost will be $9,000 per student per year, and that gross national product will be 15%".

Why have expenditures increased? The three main factors that account for this rapid growth are:

1. Increases in enrolment.
2. Increases in the price levels of educational goods and services.
3. Increases in the quality and quantity of educational programs offered.

In Alberta, as in all of Canada, the dramatic shift from a rural to an urban society has placed such heavy demands on our university systems that the evaluation and assessment of our goals and operations has become a necessity. The time to give our universities that long and sober reappraisal is now!

I must urge caution when using this information, as more accurate and detailed data can often be found in the bottom drawer of antagonistic administrators. The area of concern is so large and so open to interpretation, that areas of dispute can easily be found.

Allow me to reiterate that the information contained within this report is the most current and accurate presently available from the major data sources listed throughout the report; and that the items highlighted here merely represent a fringe of the mountain of data latent within our systems.

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Section 1: Enrolment and Population Statistics

While in the pursuit of current useable enrolment statistics one thing became enormously clear - - university administrators are going to great lengths to investigate every aspect of enrolments. This is excellent, as enrolment data is the foundation of any information system concerning university affairs.

The majority of the data provided in this section was taken from D.B.S. publications as they are the only organization, to my knowledge, that furnishes comparable enrolment statistics. This information was obtained from Canadian institutions of higher education which enrol over 99 per cent of the total number of students.

Full-time Enrolment

Enrolment in Canadian universities and colleges at December 1, 1968 was 270,093, larger by 3.4 per cent than the preceding year's comparable figure of 261,207 and larger by 16.1 per cent than the 1966-67 figure of 232,672.

Full-time graduate enrolment increased at a greater rate from 1967-68 to 1968-69 than did full-time undergraduate enrolment. Eight per cent compared to 2.9 per cent respectively.

The full-time enrolment increases for women, continued to exceed that for men.

In 1968-69 nine institutions had over 10,000 full-time university students. The University of Alberta ranked fourth behind the Universities of Montreal, Toronto and British Columbia.

Decreases in undergraduate enrolments were evident in the faculties of Theology, Arts and Education. The largest increases in undergraduate enrolments were in Fine and Applied Arts (77.[illegible]), Physical Education (30.1%), Commerce (13.3%), Law (13.1%), and Engineering and Applied Science (6.4%).

Part-time Enrolment

Total part-time enrolment in 1962 was 44,048; in 1968-69 it was 104,101. This represented an increase of 5.2 per cent over the 1967-68 figure. The bulk of the part-time undergraduate students were in Education, Commerce (or Business Administration) and Arts. Most of the part-time graduates were of these three faculties and Engineering. Part-time enrolment increased faster then full-time enrolment from 1967-68 to 1968-69.

From 1951-52 to 1968-69 part-time enrolment increased more than 23 - fold. Part-time enrolment increased from 6% of total enrolment to about 27% in that period (D.B.S. information). Projections of part-time enrolment in 1980-81 are 298,000.

In 1968-69, as in the previous five years for which D.B.S. collected detailed data, there was a higher proportion of part-time women students to total part-time enrolment than of full-time women students to total full-time enrolment. This was the case for both the undergraduate and graduate levels.

Graduate Enrolment

Graduate enrolment has risen to about 9 per cent of the total enrolment in 1967-68, from 6 per cent in 1951-52. The Economic Council of Canada predicts that graduate enrolment will rise to 15% of the total by 1980-81. Since 1951-52 university graduates with master's degrees increased by 400 per cent, and those with doctor's degrees 330 per cent.

Admission Requirements

There seems to be a trend developing in universities across Canada, to relax the subject requirements needed to get university entrance. This, we feel, will be beneficial in the long term as specialization becomes increasingly more predominant in our society. We might add that hopefully the overall average required to gain admission will be raised 5 per cent from the present 60%. This will reduce the pressures now existing in universities and will reduce the rates of the educated unemployed in the future. Equally important,

technical and vocational colleges will be able to expand their activities to serve better qualified students.

Future Prospects

Zsigmond and Wenaas expect full-time enrolments to continue increasing until 1980-81, although at a much slower rate than is now the case. Annual rates of increase may be down to less than 5% compared with recent rates of around 15%. Post-secondary full-time enrolment levels should stabilize in the 1980's or may even begin to decline in response to the birth decline of the late fifties and sixties.

By 1980 it may well be as common for young people to continue on to universities and colleges as it was in 1950 to attend high school. Almost half the population 18-21 years of age may well be enrolled full-time at the post-secondary level.

Caution should be used when interpreting data on pre-matriculation enrolment, which appears in several tables, as it is not entirely complete for all institutions. Part-time students in courses not requiring matriculation for entry have been omitted from D.B.S. data.

University and College Enrolment, 1966-67 to 1968-69

TABLE 1-1

Province	Full-time		Part-time	
	Under -		Under -	
Alberta				
1968-69	22,455	2,467	4,816	782
1967-68	17,764	1,924	4,085	619
1966-67	15,380	1,603	3,577	532
Newfoundland				
1968-69	4,563	219	1,263	-
1967-68	4,324	149	1,052	25
1966-67	3,824	69	840	41
Prince Edward Island				
1968-69	1,555	-	435	-
1967-68	1,369	-	472	-
1966-67	1,139	-	409	-
Nova Scotia				
1968-69	11,164	741	2,193	360
1967-68	9,821	680	1,686	231
1966-67	9,284	522	1,569	205
New Brunswick				
1968-69	8,322	639	3,656	107
1967-68	7,383	544	3,638	177
1966-67	6,423	439	3,329	56
Quebec				
1968-69	58,424	5,977	35,000	2,895
1967-68	74,948	7,662	40,200	4,167
1966-67	68,570	6,500	33,327	4,941
Ontario				
1968-69	81,091	11,498	32,871	4,925
1967-68	69,307	9,782	26,980	4,047
1966-67	60,862	7,727	24,484	3,376
Manitoba				
1968-69	13,928	1,171	5,151	466
1967-68	12,631	795	3,697	347
1966-67	11,702	687	2,331	324
Saskatchewan				
1968-69	13,228	656	3,038	286
1967-68	12,051	555	3,057	228
1966-67	11,021	556	2,607	176
British Columbia				
1968-69	29,243	2,752	5,194	663
1967-68	27,422	2,005	3,420	855
1966-67	24,748	1,616	3,230	460
Canada				
1968-69	243,973	26,120	93,617	10,484
1967-68	237,020	24,187	88,287	10,696
1966-67	212,953	19,719	75,703	10,111

Source: DBS No. 81-201, Table 7

Full-time and Part-time University and College Enrolment in the Regular Winter Session, by Province, 1968-69

TABLE 1-2

Province	University-grade					
	Undergraduate		Graduate		Total	
	Total	Women	Total	Women	Total	Women
			Full-time			
Newfoundland	4,563	1,661	219	26	4,782	1,687
Prince Edward Island	1,555	671	-	-		
Nova Scotia	11,164	3,857	741	146	11,905	4,003
New Brunswick	8,322	2,723	639	105	8,961	2,828
Quebec(1)	58,424	18,028	5,977	1,238	64,401	19,266
Ontario	81,091	27,540	11,498	2,001	92,589	29,541
Manitoba	13,928	5,353	1,171	229	15,099	5,582
Saskatchewan	13,228	5,112	656	114	13,884	5,226
Alberta	22,455	8,921	2,467	461	24,922	9,382
British Columbia	29,243	11,368	2,732	541	31,995	1,909
Canada	243,973	85,234	26,120	4,861	270,093	90,095
			Part-time			
Newfoundland	1,263	703	-	-	1,263	703
Prince Edward Island	435	272	-	-	435	272
Nova Scotia	2,193	1,255	360	101	2,553	1,356
New Brunswick	3,656	2,436	107	36	3,763	2,472
Quebec(1)	33,000	12,879	2,895	729	37,895	13,608
Ontario	32,871	13,618	4,925	882	37,796	14,500
Manitoba	5,151	2,428	466	93	5,617	2,521
Saskatchewan	3,038	1,611	286	49	3,324	1,660
Alberta	4,816	2,642	782	207	5,598	2,849
British Columbia	5,194	2,379	663	185	5,857	2,564
Canada	93,617	40,223	10,484	2,282	104,101	42,505
			Total			
Newfoundland	5,826	2,364	219	26	6,045	2,390
Prince Edward Island	1,990	943	-	-	1,990	943
Nova Scotia	13,357	5,112	1,101	247	14,458	5,359
New Brunswick	11,978	5,159	746	141	12,724	5,300
Quebec(1)	93,424	30,907	8,872	1,967	102,296	32,874
Ontario	113,962	41,158	16,423	2,883	130,385	44,041
Manitoba	19,079	7,781	1,637	322	20,716	8,103
Saskatchewan	16,266	6,723	942	163	17,208	6,886
Alberta	27,271	11,363	3,249	668	30,520	12,231
British Columbia	34,437	13,747	3,415	726	37,852	14,473
Canada	337,590	125,457	36,604	7,143	374,194	132,600

(1) A decrease in university enrolment from 82,610 in 1967-68 to 64,401 is offset by an increased enrolment in the non-university post-secondary institutions. This is explained in part by the fact that students who formerly took their first and second year training in affiliated colleges and universities have been transferred to the CEGEP institutions. For 1968-69, the enrolment in these community colleges is 35,520 (23,277 in academic training and 12,243 in vocational).

Source: DBS Catalogue No. 81-201 (1968-69)

Full-time University-grade Enrolment Related to the Population, Age 18-24, by Province, 1967-68 to 1968-69

TABLE 1-3

Academic year and province	Total full-time enrolment		Population aged 18-24[1]		Univ. & Coll. enrolment as a %age of the population age 18-24	
	Total	Women	Total	Women	Total	Women
1968-69						
Newfoundland...............	4,782	1,687	64,300	32,300	7.4	5.2
Prince Edward Island.......	1,555	671	12,900	6,400	12.1	10.5
Nova Scotia................	11,905	4,003	90,100	44,400	13.2	9.0
New Brunswick..............	8,961	2,828	77,500	38,200	11.6	7.4
Quebec.....................	64,401	19,266	751,300	377,300	8.6	5.1
Ontario....................	92,589	29,541	812,700	404,600	11.4	7.3
Manitoba...................	15,099	5,582	110,500	54,700	13.7	10.2
Saskatchewan...............	13,884	5,226	106,200	52,400	13.1	10.0
Alberta....................	24,922	9,382	167,800	84,600	14.9	11.1
British Columbia...........	31,995	11,909	221,400	108,700	14.5	11.0
Total, Canada..............	270,093	90,095	2,419,400[2]	1,205,200[2]	11.2	7.5
1967-68						
Total, Canada..............	261,207	85,846	2,290,200[2]	1,143,700[2]	11.4	7.5

---

[1] Estimated as of June 1, 1967 for 1967-68 and June 1, 1968 for 1968-69. The figures are the sum of estimates for individual years of age from 18 to 24 inclusive prepared by the Census Division, D.B.S.

The use of the group 18-24, which is convenient for purposes of comparison, should not be interpreted as indicating the ages of all Canadian youth who attend university since few courses run for eight years, and since some students enter before the age of 18 and a number of students are in attendance after age 24.

[2] The total for Canada includes Yukon and the Northwest Territories.

Source:-

DBS, "Fall Enrolment in Universities and Colleges"

TABLE 1-4 SUMMARY OF SUMMER SCHOOL ENROLMENT IN UNIVERSITIES AND COLLEGES, BY PROVINCE, 1967 -68 and 1968 - 69

Year and province	University-grade						Pre-matriculation	
	Undergraduate		Graduate		Total			
	Total	Women	Total	Women	Total	Women	Total	Women
1967 -68								
Newfoundland	1,803	785	-	-	1,808	785	-	-
Prince Edward Island	404	257	-	-	404	257	195	164
Nova Scotia	2,611	1,518	183	57	2,794	1,575	1	1
New Brunswick	4,371	2,743	201	48	4,572	2,791	-	-
Quebec	13,874	6,982	711	159	14,585	7,141	[illegible]	[illegible]
Ontario	24,548	9,903	2,808	774	27,356	10,677	1,573	[illegible]
Manitoba	4,579	2,027	64	12	4,643	2,039	[illegible]	[illegible]
Saskatchewan	7,975	3,895	81	30	8,056	3,925	[illegible]	[illegible]
Alberta	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
British Columbia	5,686	2,915	770	243	6,456	3,158	[illegible]	[illegible]
Total	70,844	33,648	5,295	1,416	76,139	35,064	4,580	2,295
1968 -69								
Newfoundland	2,546	1,078	-	-	2,546	1,078	-	-
Prince Edward Island	525	286	-	-	525	286	268	213
Nova Scotia	3,289	1,685	191	64	3,480	1,749	55	23
New Brunswick	4,325	2,596	488	206	4,813	2,802	4	2
Quebec	16,269	7,416	633	159	16,902	7,575	3,367	1,658
Ontario	31,957	12,724	3,147	843	35,104	13,567	348	[illegible]
Manitoba	7,634	4,027	20	4	7,654	4,031	113	66
Saskatchewan	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	184	140
Alberta	5,963	3,183	511	126	6,474	[illegible]	1	-
British Columbia	9,826	4,671	732	151	10,558	4,822	350	155
Total	90,667	41,807	6,162	1,584	96,829	43,391	4,690	[illegible]

Source: DBS Catalogue No. 81-204 (1968-69)

TABLE 1-5 SUMMER SCHOOL ENROLMENT IN UNIVERSITIES AND COLLEGES, FOR ALBERTA, BY INSTITUTION, 1968-69

Province and institution	University-grade						Pre-matriculation	
	Undergraduate		Graduate		Total			
	Total	Women	Total	Women	Total	Women	Total	Women
ALBERTA:								
University of Alberta	3,578	1,954	372	95	3,950	2,049	1	-
St. Joseph's College	-	-	-	-	-	-	-	-
University of Calgary	1,989	1,003	139	31	2,128	1,034	-	-
Lethbridge Junior College	33	10	-	-	33	10	-	-
University of Lethbridge	363	216	-	-	363	216	-	-
Total	5,963	3,183	511	126	6,474	3,309	1	-

Source: DBS Catalogue No. 81-204 (1968-69)

TABLE 1-6-A Enrollments of Full-time Students in Various Canadian Universities

	1964-65			1965-66			1966-67			1967-68			[illegible]		
	UG	G	Total	UG	G	Total	UG	G	Total	UG	G	Total	UG	G	Total
of A	8,394	940	9,334	9,149	1,125	10,274	10,207	1,282	11,489	11,478	1,549	13,027	13,383	[illegible]	[illegible]
of C	2,471	116	2,587	3,070	198	3,268	3,774	334	4,108	4,521	459	4,980	6,142	628	6,770
of Leth.	-	-	-	-	-	-	-	-	-	638	-	638	1,024	-	1,024
of M	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	8,534	854	9,388	9,582	1,066	10,648
of T	12,795	2,412	15,207	13,743	3,092	16,835(1)	15,051	3,142	18,193	16,718	3,257	19,975(2)	17,732	[illegible]	[illegible]
Carleton	2,263	217	2,480	2,800	268	3,068	3,443	281	3,724	4,758	408	5,166	5,308	[illegible]	[illegible]
Brock	784	11	795	1,453	38	1,491	2,540	119	2,659	3,509	226	3,735	5,575	[illegible]	[illegible]
Western	4,492	732	5,274	5,035	847	5,882	6,763	955	7,718	7,300	1,029	8,329	8,551	1,061	9,612
Queen's	3,571	458	4,029	4,120	523	4,643	4,500	609	5,109	5,060	721	5,781	5,665	[illegible]	[illegible]
McMaster	2,902	410	3,312	3,256	523	3,779	4,001	647	4,648	4,412	779	5,191	5,152	1,050	6,202

(1) Opening of Scarborough College
(2) Opening of Erindale College

TABLE 1-6-B Rate of Increases of Total Full-time Enrollments

	1964-65 to 1965-66	1965-66 to 1966-67	1966-67 to 1967-68	[illegible]
of A	10.1%	11.8%	13.4%	[illegible]
of C	26.3%	25.7%	21.2%	[illegible]
of Leth.	-	-	-	[illegible]
of M	N/A	N/A	N/A	[illegible]
of T	10.7%	8.1%	9.8%	[illegible]
Carleton	23.7%	21.4%	38.7%	[illegible]
Brock	87.6%	78.3%	40.5%	141.[illegible]
Western	11.5%	31.2%	7.9%	15.[illegible]
Queen's	15.2%	10.0%	13.2%	12.5%
McMaster	14.1%	23.0%	11.7%	19.5%

Source: Annual Reports and Presidents' Reports of the Various Universities or their representatives.

TABLE 1-7 Universities of Alberta - Full-Time Enrollments

Year	U of A		U of C		U of L		Other	
	UG	Gr	UG	Gr	UG	Gr	UG	Gr
1959-60	4,900	437	684	-				
1960-61	5,511	557	1,072	10				
1961-62	6,198	610	1,142	11				
1962-63	6,791	626	1,714	18				
1963-64	7,451	734	2,048	60				
1964-65	8,394	940	2,471	116				
1965-66	9,149	1,125	3,070	198				
1966-67	10,207	1,282	3,774	334				
1967-68	11,478	1,549	4,521	459	638(1)	-		
1968-69	13,383	1,799	6,142	628	1,024	-		
1969-70	15,266	2,088	7,172	790	1,261	-		
1970-71*	16,230	2,390	8,941	930	1,460	-		
1971-72*	18,120	2,790	11,070	1,140	1,620	-		
1972-73*	20,240	2,800	13,700	1,390	1,800	-		
1973-74*	22,590	2,800	16,950	1,610	2,025	-	2,640 (2)	
1974-75*	22,600	2,800	20,980	1,900	2,170	-	6,126 (2)	
1975-76*	22,600	2,800	23,100	1,900	2,275	-	10,000 (2)	

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* Projected by Budget Bureau

(1) Lethbridge figures includes spring semester enrollments

(2) Second Edmonton University Cost Study, Budget Bureau, fall/69

PROVINCE OF ALBERTA

UNIVERSITY ENROLLMENT

Actual 1960-61 to 1968-69; Projected 1969-70 to 1975-76

TABLE 1-8

	(1)Population ('000s)	Population 18-24 ('000)	Participation Rate (of Pop. 18-24) %	Participation Rate (Total Pop.) %	University Enrollment
1960-1961	1,332	126	5.7	0.54	7,165
1961-1962	1,369	134	6.1	0.59	8,239
1962-1963	1,403	137	6.7	0.65	9,166
1963-1964	1,430	143	7.2	0.72	10,293
1964-1965	1,450	146	8.2	0.82	11,921
1965-1966	1,463	153	8.8	0.93	13,542
1966-1967	1,490	160	9.7	1.05	15,597
1967-1968	1,526	166	11.2	1.22(2)	18,645
1968-1969	1,547	174	13.2	1.49	22,976(3)
1969-1970	1,577	179	15.5	1.76	27,760
1970-1971	1,608	184	17.0	1.94	31,251
1971-1972	1,640	192	18.2	2.13	35,013
1972-1973	1,674	200	19.7	2.35	39,378
1973-1974	1,707	209	21.0	2.57	43,820
1974-1975	1,743	217	22.1	2.75	47,932
1975-1976	1,780	225	23.3	2.95	52,510

(1)Alberta Bureau of Statistics projection

(2)Participation rates for other Provinces for 1967-68 were as follows. Alberta's relatively low participation rate is in part due to its having the youngest population in Canada.

British Columbia	1.51
Saskatchewan & Manitoba	1.34
Ontario	1.13
Canada	1.21

(3)Entrance requirements changed resulting in increased enrollments.

University of Alberta Full-time Enrolment
Faculty Populations - Graduates 1965-70
TABLE 1-9

	1965-66		1966-67		1967-68		1968-69		1969-70	
Faculty	Masters	Dr	Masters	Dr	Masters	Dr	Masters	Dr	Masters	Dr
Agriculture	68	37	59	38	68	42	90	47	80	44
Arts	197	54	232	81	245	136	295	169	335	199
Commerce	23	-	34	-	31	-	53	-	61	-
Education	96	56	117	53	155	63	170	76	229	115
Engineering	99	32	106	24	117	42	130	57	133	81
Home Economics	-	-	-	-	3	-	1	-	3	-
Pharmacy	10	5	13	2	20	8	14	11	13	14
Physical Education	28	0	36	0	43	3	46	6	47	17
Science	190	171	219	192	242	251	301	251	289	300
Dentistry	2	0	1	0	1	-	2	-	4	-
Law	2	-	1	0	1	-	-	-	3	-
Medicine	29	26	28	37	28	39	39	48	47	58

Source: Office of Institutional Research and Planning, University of Alberta

Population of Canada and Alberta 1963-1981

TABLE 1-10 (in thousands)

Year	Canada	Alberta
1963	18,931	1,403
1964	19,290	1,429
1965	19,644	1,450
1966	20,015	1,463
1967	20,405	1,483
1968	20,744	1,507
1969	21,061	1,531
1970	21,377	1,556
1971	21,717	1,581
1972	22,044	1,607
1973	22,384	1,634
1974	22,736	1,662
1975	23,101	1,691
1976	23,465	1,720
1977	23,758	1,751
1978	24,160	1,783
1979	24,574	1,816
1980	25,014	1,851
1981	25,418	1,886

Source: DBS Catalogue No. 91-210, 1970
: ABS Publication April 1968
: Budget Bureau Projections

Population Age Group 18-24 Canada and Alberta
Estimates and Projections 1961 - 1975

TABLE 1-11

Year	Canada	Alberta	Alberta as a % of Canada
1961	1,797,772	126,248	7.02
1967	2,315,119	162,534	7.02
1968	2,423,460	171,143	7.06
1969	2,534,084	179,921	7.10
1970	2,634,509	188,527	7.15
1971	2,713,020	196,299	7.23
1972	2,792,049	204,838	7.33
1973	2,871,893	213,176	7.42
1974	2,968,477	223,712	7.53
1975	3,049,319	231,269	7.58

Source: DBS and ABS Statistics

TABLE 1-12 - POPULATION GROWTH AND PROJECTIONS (a)

METROPOLITAN AND OTHER AREAS

ALBERTA

1951 to 1981

Year	Edmonton metro-politan area(b)	Calgary metro-politan area(c)	Rest of Alberta	Total Alberta(d)
In thousands				
1951	177	142	621	940
1956	255	201	667	1,123
1961	338	279	715	1,332
1966	401	331	731	1,463
1971	475	390	725	1,590
1976	555	460	720	1,735
1981	640	530	720	1,890
Average annual percent growth				
1951-56	7.6	7.1	1.5	3.6
1956-61	5.8	6.8	1.4	3.5
1961-66	3.5	3.5	0.4	1.9
1966-71	3.4	3.4	-0.2	1.8
1971-76	3.2	3.2	-0.1	1.7
1976-81	2.9	2.9	0.0	1.7

(a) DBS census figures for 1951-1966 and projections for 1971-1981.

(b) Includes the City of Edmonton (377,000 in 1966), the Town of St. Albert (nearly 10,000 in 1966), and adjacent areas (about 14,000 in 1966, including Sherwood Park, Griesbach Barracks and Namao Airport)

(c) The metropolitan area coincides with the boundaries of the City of Calgary

(d) From projections in Table 1

Section 2: Tuition Fees and Accommodation Costs

Generally speaking, undergraduate tuition fees in Eastern Canada are higher for all faculties, than those in Western Canada. This may be explained in terms of the higher cost of providing those services deemed necessary to operate universities in eastern centres where wages, land, building expenses, etc. are more expensive. Thus, Alberta finds her tuition fees to be a relatively attractive feature to foreign and eastern students, as is the general cost of living in Alberta. Therefore, if we are to mitigate the trend today of educating non-resident students (who probably will never become residents of Alberta) we must give serious consideration to raising tuition fees 5 to 15 per cent, dependent of course upon the particular faculty and its expected enrolment. This will raise an additional estimated $750,000 in revenues.

When giving active consideration to the above mentioned recommendation several items must be kept in mind. We must realize that this increase in fees may possibly prevent students who are well qualified but unable to afford the additional monies, from attending university. This will however be an extreme case and is highly unlikely. We must also bear in mind the monetary returns of the student from a particular faculty once he has graduated. For example, art students are having difficulty finding well paying jobs, whereas, medical students can look forward to achieving at least a $20,000 per year income. Should students pay tuition fees in proportion to the salary they can expect to earn at some later date? Should students pay tuition fees in accordance with the per student-faculty operating costs? Should the government charge an after-graduation fee based on gross income? These are all interesting questions which should be pursued by various concerned parties, in particular the Universities Commission.

Tuition fees for graduate schools vary indiscriminately with no particular trend being readily identifiable. As is the case with undergraduate tuition fees, graduate tuition fees are relatively inexpensive and could be increased ($50 - $100) without seriously affecting enrolment or the quality of the student wishing to enter one of Alberta's graduate programs. The cliche "educational opportunity

for all" does not truly apply at post-graduate levels; for the simple reason that admission requirements normally demand an undergraduate degree which would also immediately infer that the student, if working, would fall within the top half of Canada's per capita income index. In other words graduate programs are restrictive in nature, and a nominal increase of fifty or so dollars would not be prohibitive to serious students or detrimental to programs.

Any increases in graduate tuition fees should be made with an eye to a number of factors; three of the more important points for consideration are:

(1) quality of the present programs and aspirations for the future.

(2) the amounts and conditions under which funds are and will be made available to graduate students.

(3) the demand, particularly in Alberta, for persons with specific post-graduate degrees.

I feel graduate schools are deserving of a more unified approach in Canada. That is to say, the Federal Government should cooperate with Provincial and Municipal Governments to standardize admission requirements to graduate schools and to seek an end to the idiotic competition and duplication which takes place in the name of prestige. Alberta provides as good an example as exists in Canada; the establishment of a medical school in Calgary when Edmonton already has one of the finest in the country seems difficult to justify in economic or educational grounds. If we are to develop excellence in our graduate programs, a greater degree of specialization would seem essential.

The rather lengthly table that follows shows a general picture of tuition and accommodation expenses in various Universities across Canada. The accommodation costs refer only to university-operated residences and not off-campus or other living quarters. The costs shown do not include transportation, books, clothing, entertainment, etc. In comparing this data with that of 1969-70, we see that tuition fees have remained relatively stable throughout. On the other hand, accommodation costs have risen in over one half the institutions, with an average increase of about fifty dollars.

TABLE 2-13 Tuition and Living Accommodation Costs at Canadian [illegible] Universities and Colleges, [illegible]
(First of Two Pages)

Province and institution	Tuition fees							
	Undergraduate					Graduate	Other fees([illegible])	Living accommodation([illegible])
	Arts and science(1)	Dentistry	Engineering	Law	Medicine			
				DOLLARS				
Newfoundland:								
Memorial University(4)	550	-	500	-	500	500	24	[illegible]
Prince Edward Island:								
University of Prince Edward Island	550	550(14)	500(7)	-	550(7)	550	[illegible]	775
Nova Scotia:								
Acadia University	565	-	565	-	-	350	35-45	-
Dalhousie University	577.25	694.25	577.25	[illegible]	677.25	[illegible]	32.75	835-910
St. Francis Xavier University	548	-	548	-	-	200-400	[illegible]	818
New Brunswick:								
Mount Allison University	635	635(14)	635	635(14)	635	635	50	-
University of New Brunswick	610	-	610-640	610	-	500	55	[illegible]
Quebec:								
Université Laval	450-500	-	500	450	600	500	25	[illegible]
McGill University	376-619	607-612	375-655	551	719	591	46.50-91.50 (9)	1,100
Université de Montréal	493-543	593	493	493	693	493	(8)	1,030
Université de Sherbrooke	465	-	465	465	650	465	58	[illegible]
Sir George Williams University	450-475	-	525-650	-	-	400	60-65	(10)
Manitoba:								
Brandon University	425	-	-	-	-	-	39	-
The University of Manitoba	425	550	525	425	625	375-425	27-45.50	[illegible]
University of Winnipeg	425	-	-	-	-	-	[illegible]	[illegible]
Saskatchewan:								
University of Saskatchewan	410-425	600	410-505	450	635	425	38.50	[illegible]

TABLE 2-13 continued Tuition fees

Province and institution	Undergraduate					Graduate	Other fees(4)	Living accommo-dation(5)
	Arts and science(1)	Dentistry	Engineering	Law	Medicine			
				DOLLARS				
Ontario:								
Carleton University	556.50	-	616.50	-	-	433	76.50	840-890
University of Guelph(11)	480	-	545	-	-	266	48	940
Lakehead University	510-520	-	560	-	-	410	50	985-1,035
McMaster University	480-485	-	545	-	1,020(18)	400-495	45-60	990-1,050
University of Ottawa	465-540	-	540	465	635	268	71.86	400-480(12)
Queen's University	500	-	575-625	500	500-625	395	75	845-1,159
University of Toronto(13)	470	640	650	490	700	-	10-72(16)	1,000(16)
Trent University(14)	500	-	-	-	-	400	50-140(17)	1,030-1,100
University of Waterloo:								
Regular academic year	510	-	665	-	-	405	64	900-1,100
Waterloo Lutheran University	520	-	-	-	-	440	67.50	925-975
University of Windsor	540	-	620	560	-	475	(8)	975-1,120(15)
York University	550	-	-	550	-	-	10	985-990
Alberta:								
University of Alberta	400	600	500	400	600	500-750	45.50	830-88,
University of Calgary	400	-	500	-	(19)	500	44.50	650
University of Lethbridge	400	-	-	-	-	-	28	900
British Columbia:								
University of British Columbia	428	644	522	506	644	600-900	29	85[illegible]
Simon Fraser University	428(11)	-	-	-	-	3[illegible]0(11	20(11)	-
University of Victoria	428	-	-	-	-	150-450	32	-

Source: DBS Catalogue 81-219
See footnotes following page

FOOTNOTES:

(1) Excluding institutions which grant degrees only in theology, or which hold their degree-granting powers in abeyance while in affiliation or federation with another degree-granting institution.

(2) The figures shown are intended to give a general picture of costs to students and therefore may not be applicable to all individual cases.

(3) Fees in such faculties as agriculture, commerce, education, and household science are usually in the same range as those for arts and science.

(4) These include compulsory fees such as those for student organizations and athletics. These fees are sometimes included in the total tuition charge.

(5) Includes room and board charges in university-operated residences for the eight to nine month academic year. No attempt has been made to cover such items as transportation, textbooks and supplies, entertainment, and other personal expenditures.

(6) Tuition fees for all full-time students who are regularly resident in Newfoundland are paid by the Newfoundland government.

(7) Not all years of engineering are given. Students complete the final years at another institution.

(8) Included with tuition fees.

(9) Non-Canadian students are required to pay an additional $45 for compulsory health insurance.

(10) The institution has no residence.

(11) The university operates on a three semester system. The figures shown are for two semesters, which correspond to the regular academic year charges given for other institutions.

(12) Room only.

(13) 1969-70 fee. 1970-71 fee has not yet been set.

(14) Pre-university only.

(15) Possible increase of 6 per cent in board only.

(16) Subject to change.

(17) $140 for non-resident students.

(18) For three semesters per year.

(19) To be determined.

Section 3: The Post-Secondary Student: Income and Expenditures

Any baseline study on universities must include some information describing the student, as he is the prime utilizer of the system. The information presented in this section is for the 1968-69 calendar year, and represents the results of a report prepared for the Federal-Provincial Committee on Canada Student Loans by the Education Support Branch of the Federal Department of Secretary of State. The data and tables presented in this section were drawn from the "Post-Secondary Student Population Survey" done by D.B.S. under the auspices of the Federal Department of Finance.

A 32,000 pupil sample was selected from the approximately 400,000 students in Canadian institutions eligible for financial assistance under the Canada Student Loans Act. A response rate of about 58% of the total sample was experienced. The precautionary steps taken by D.B.S. to come up with reliable data in this survey, justify placing confidence in the general reliability of the data, but at the same time caution should be exercised when interpreting the findings literally.

The bulk of the post-secondary student population (PSSP) is made up of university undergraduates, (approximately 245,000 students) as they account for 63% of all post-secondary students. Males represent 62% of the total PSS population and females, 38%. It is interesting to note that males outnumber females among university graduates (3:1), university undergraduates (2:1), and other study programs (3:1).

Almost two-thirds of single post-secondary students live away from home. The proportion of males and females living away from home is approximately equal. Married (and therefore independent) students account for 11% of the population, dependent students 78%, and other unmarried independent students account for the additional 11%. Of the 42,500 married students, over half (56%) have a spouse working full-time. And an additional 13% have a spouse who is working part-time.

About half of both the mothers and fathers of post-secondary students

have a level of education equivalent to at least high school graduation. Interestingly enough a high proportion of the students have a mother or a father who is a high school drop-out (27% of the fathers and 23% of the mothers). If a student is in university as opposed to a non-university post-secondary institution, his parents are more likely to have a university degree.

The student's sources of income include stipends (or non-repayable money from the Federal and Provincial governments, the educational institutions, private firms, and non-profit organizations), parental cash contributions, personal revenue (from part-time work, spouse's income, summer savings, and cash gifts from relatives), reduction in assets (reduction in savings, sale of securities, car, house or other property), and additions to liabilities (loans from family, educational institutions, Canada Student Loans, provincial government, privately arranged loans and bank loans). Half of the student population has an income of $1,648 or less, but as many as ¼ of the students have an income of more than $3,000.

Married students are more likely than single students to have a relatively high income; probably because of age, number of years previously in the labor force, spouse's income and savings. Sixty-six per cent of married students and only 4% of single students have an income greater than $3,600. Conversely, almost ½ of the single students and less than 1/10th of the married students have an income of $1,500 or less.

University graduates (44% of whom are married) are the most likely to have relatively high incomes. While 35% of university undergraduates have an income of $1,500 or less. Also worth noting is that only 8% of the undergraduates have an income of less than $900, and only 13% have an income of more than $3,000.

The student's expenditures include tuition and fees, other academic expenses (text books, instruments, thesis, etc.), personal expenses (housing, food, beverages, personal items, utility bills, transportation, health and medical care, recreation, laundry and clothing), additions to assets (additions to savings account or securities, purchase of car, and other assets), reduction

in liabilities (loan payments, payments on car, and all other debt reductions).

The table on "Expenditure Distribution" attempts to analyze the various expenditures incurred by the student. As expected, university students have a much higher level of expenditure as compared to other non-university post-secondary students. Personal expenses vary significantly by the students' place of residence and marital status.

An analysis of university students' summer employment showed that approximately 81 per cent of male students and 71 per cent of female students worked for pay during the summer of 1968. Males consistently show higher employment rates than did females for all types of post-secondary education. Note that 6.6% of the total male student population and 10.7% of the female population gave as their reason for not working, the inability to find a job.

Approximately 27% of the total post-secondary male population (working and non-working) earned less than $750 for their summer employment in 1968, whereas 42% of the females were in this category. On the other hand 51% of the males earned over $750 compared with 24% of the female students. From 1968 summer earnings, 45% of male and 49% of female students saved $600 or less.

The average gross summer earnings for male post-secondary students who worked was $1,050 and $650 for females, in 1968. The averages for 1969 summer employment, as supplied by the Department of Manpower and Immigration, were $1,110 for males and $620 for females.

Please see appendix "A" for further information.

Income Distribution of Post-Secondary Students, 1968-69

TABLE 3-14

Source of Income	Percentage of Total	$(millions)
Stipend (all sources)	18.0	$145.3
Parents' Contribution (cash only)	16.6	134.5
Personal Revenue (part-time work, spouses' income, summer savings, cash gifts from relatives)	39.6	320.0
Reduction in Assets (sale of car, securities or other property)	3.2	26.0
Government Loans (1)	11.7	94.6
Personal Loans (2)	10.9	87.8
Total	100.0	$808.2

Source: Education Support Branch
Department of the Secretary of State
Government of Canada

(1) Government loans were computed by the Department of Finance from federal and provincial accounts.

(2) Personal loans include loans from the student's family, educational institution, privately arranged loans, bank loans and other.

Expenditure Distribution of Post-Secondary Students, 1968-69

TABLE 3-15

Item of Expenditure	Percentage of Total	$(millions)
Tuition, fees and other academic expenses	26.2	$211.9
Housing, food and beverages	28.7	231.7
Residual personal expenses (utility bills, transportation, health and medical care, recreation, laundry and clothing and other personal items)	26.4	213.3
Additions to assets and Reductions in liabilities	18.7	151.2
Total	100.0	$808.1

Source: Education Support Branch
Department of the Secretary of State
Government of Canada

Income and Expenditures: Averages and Medians, 1968-69

TABLE 3-16

INCOME

Item	Average Income($)	Median Income($)
Stipend	$ 365	$ 536
Parental Contribution	338	448
Personal Revenue	805	553
Reduction in Assets	66	291
Additions to Liabilities	222	623
Total	$1,796	$2,451

EXPENDITURE

Item	Average Expenditure ($)	Median Expenditure ($)
Tuition, fees, other academic expenses	$ 543	$ 586
Housing, food, beverages	600	636
Residual personal expenses	531	420
Additions to assets and reductions in liabilities	390	277
Total	$2,064	$1,919

Source: Education Support Branch
Department of the Secretary of State
Government of Canada

Section 4: University of Alberta [illegible][1]

There are a number of short phrases which describe students' ability to move from year one, to year two, to year "N". A few of the more common ones are: retention, attrition, drop-out, and success rates or ratios. Essentially, they are all concerned with how many students will or will not continue on in their next year of studies.

Data following these two pages of discussion, is taken from a preliminary study of student retention rates at the University of Alberta. These retention rates reflect a great number of factors which may affect a student's decision and ability to carry on from year to year. A few of the broader categorical factors are: motivation, demography, personality, finances, and academic achievement.

Retention rates, as I call it, have gained a great deal of attention recently . . . and rightly so. The inherent potential use and possible implications of such information may revolutionize the insight of university administrators. The current study that is taking place at the University of Alberta will attempt to extract a number of criteria for practical use. These largely will fall into the two major categories, given below:

(1) Those students who leave the institution of higher education in which they first enrolled, without completing their program; and who, within a specified period of time, enrol in another institution of higher education within the province.

(2) Those students who leave the institution of higher education in which they were first enrolled before completing their program and do not enrol in any other institution of higher education in Alberta, within a specified period of time.

The Office of Institutional Research and Planning will also attempt to subdivide the student body into four major classes:

(1) Students who successfully complete their programs.
(2) Students who voluntarily leave the institution in which they were first enrolled; that is, without being requested to do so by the administration.
(3) Students who were requested to leave by the administration.
(4) Students who are placed in a probationary status due to academic or disciplinary reasons.

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[1] Information obtained from data and proposals prepared by the Office of Institutional Research and Planning," University of Alberta.

Research previously done in this area has resulted in a number of interesting facts . . . some obvious, others not so obvious. These facts, listed below, are representative of the type of information which hopefully will be forth coming from the University of Alberta's investigation.

(1) There has been an increase in student withdrawals due to dissatisfaction with the university environment and to conflicts in settling personal goals and interests.
(2) The major reason for females dropping out of school is marriage.
(3) Males more consistently attribute their dropping out to low grades, dissatisfaction, lack of motivation, and lack of interest.
(4) Withdrawal rates tend to be higher for older students than for younger students, perhaps because of more diversified extra-curricular demands, responsibilities, and pressures.
(5) Jewish males have a much lower drop-out rate than do Catholics or Protestants.
(6) Males attending religious services once a week or more have a greater tendency to become dropouts than those who attend only a few times a year.
(7) Rural students and students from small towns have a higher dropout rate than do students from larger urban areas.
(8) High school averages appear to be negatively related to forced withdrawals, but not to voluntary withdrawals.
(9) Dropouts participated less in organized extracurricular activities than stay-ins.

The list goes on and on. What is evident is that if the question of retention rates is approached scientifically it can result in startling facts which could lead to improvements in our university system. To this end, the Budget Bureau recommends that every encouragement be given to the further investigation of this question.

University of Alberta Full-time Enrolment
Faculty Populations and Retention Rates
Undergraduates - 1965-1970

TABLE 4-17

	Year 1	Year 2	Year 3	Year 4	Total	Retention 1-2	Retention 2-3	Retention 3-4
(A) Agriculture								
1965-66	83	88	55	55	281	-	-	-
1966-67	90	88	71	57	306	1.060	0.807	1.036
1967-68	95	112	75	71	353	1.244	0.852	1.000
1968-69	100	81	89	76	366	0.853	0.795	1.013
					*(346)			
1969-70	110	105	74	87	376	1.050	0.914	0.978
(B) Arts								
1965	603	522	429	47	1,601	-	-	-
1966	718	636	518	54	1,926	1.055	0.992	0.126
1967	850	721	634	63	2,268	1.004	0.997	0.122
1968	1,060	828	748	100	2,736	0.974	1.037	0.158
1969	1,150	1,017	799	133	3,099	0.959	0.965	0.178
(C) Commerce								
1965	155	160	142	151	608	-	-	-
1966	271	154	151	139	715	0.994	0.944	0.979
1967	270	229	131	134	764	0.845	0.851	0.887
1968	357	220	207	140	924	0.815	0.904	1.069
1969	399	303	201	186	1,089	0.849	0.914	0.879
(D) Dental Hygiene								
1965	21	16	-	-	38	-	-	-
					*([illegible])			
1966	22	19	-	-	41	0.905	-	-
1967	22	21	-	-	43	0.955	-	-
1968	25	21	-	-	46	0.955	-	-
1969	25	21	-	-	46	0.840	-	-

(E) Education	1	2	3	4	A.D.	Dip.	Total	Retention 1-2	Retention 2-3	Retention 3-4
1965	736	903	558	302	208	17	2,724	-	-	-
1966	755	904	628	400	201	72	2,960	1.228	0.695	0.717
1967	755	980	659	467	266	78	3,205	1.298	0.729	0.744
1968	980	1109	721	533	415	83	3,841	1.469	0.736	0.809
1969	975	1110	851	641	427	66	4,070	1.133	0.767	0.889

	1	2	3	4	Total	Retention 1-2	Retention 2-3	Retention 3-4
(F) Engineering								
1965	306	182	192	170	850	-	-	-
1966	390	218	233	181	1,022	0.712	1.280	0.943
1967	442	268	209	205	1,124	0.687	0.959	0.880
1968	442	304	232	183	1,161	0.688	0.866	0.876
1969	464	351	291	225	1,331	0.794	0.957	0.970
(G) Home Economics								
1965	76	47	29	-	152	-	-	-
1966	90	87	44	-	[illegible]	[illegible]	[illegible]	-
1967	104	101	91	-	[illegible]	[illegible]	[illegible]	-
1968	[illegible]	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]	-
1969	95	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]	-
(H) Med. Laboratory Science								
1965	28	13	[illegible]	-	[illegible]	-	-	-
					*([illegible])			
1966	[illegible]	10	[illegible]	-	[illegible]	[illegible]	[illegible]	[illegible]
1967	[illegible]	19	[illegible]	16	[illegible]	[illegible]	[illegible]	[illegible]
1968	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1969	31	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

TABLE 4-17 continued

	Year									
(I) Nursing	1	2	3	4	5	Dip.				
1965	76	-	-	-	40	56	[illegible]	-	-	-
1966	59	-	-	-	36	69	[illegible]	[illegible]	1.000	1.000
1967	57	28	-	-	73	[illegible]	[illegible]	[illegible]	1.000	1.000
1968	110	30	23	-	80	69	[illegible]	[illegible]	0.821	1.000
1969	38	36	27	23	-	42	[illegible]	[illegible]	0.900	1.00

(J) Nursing - Post Basic	1	2	3	4				
1969	37	142	-	-	17[illegible]	-	-	-

(K) Pharmacy								
1965	76	63	61	[illegible]	[illegible]	-	-	-
1966	76	73	57	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1967	73	68	72	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1968	71	76	58	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1969	71	79	68	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

(L) Ph. Education								
1965	118	89	73	[illegible]	[illegible]	-	-	-
1966	114	105	92	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1967	124	124	115	5	[illegible]	[illegible]	[illegible]	[illegible]
1968	154	117	141	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1969	188	146	138	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

( ) Rehab. Medicine								
1965	39	24	28	-	[illegible]	-	-	-
1966	40	28	22	-	[illegible]	[illegible]	[illegible]	0.036
1967	60	36	30	-	[illegible]	[illegible]	[illegible]	0.045
1968	63	45	33	-	[illegible]	[illegible]	[illegible]	0.033
1969	76	52	45	-	[illegible]	[illegible]	[illegible]	0.033

( ) Science								
1965	484	455	352	[illegible]	[illegible]	-	-	-
1966	543	435	392	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1967	649	473	411	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1968	871	603	427	114	[illegible]	[illegible]	[illegible]	[illegible]
1969	1,022	748	475	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

(O) Non-professional Sub-total	1	2	3	4	Other				
1965	2,801	2,562	1,938	[illegible]	[illegible]	[illegible]	-	-	-
1966	3,196	2,757	2,224	894	378	[illegible]	[illegible]	[illegible]	[illegible]
1967	3,531	3,180	2,435	1,035	479	[illegible]	[illegible]	[illegible]	[illegible]
1968	4,369	3,569	2,789	1,191	647	**12,565	[illegible]	[illegible]	[illegible]
1969	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

( ) Dentistry	1	2	3	4				
1965	53	36	[illegible]	[illegible]	[illegible]	-	-	-
1966	50	56	36	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1967	48	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1968	55	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1969	49	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

( ) [illegible]								
1965	79	[illegible]	38	--	[illegible]	-	-	-
1966	73	64	[illegible]	--	[illegible]	[illegible]	[illegible]	[illegible]
1967	101	[illegible]	[illegible]	--	[illegible]	[illegible]	[illegible]	[illegible]
1968	114	76	[illegible]	--	[illegible]	[illegible]	[illegible]	[illegible]
1969	136	96	[illegible]	--	[illegible]	[illegible]	[illegible]	[illegible]

TABLE 4-17 continued

	Year 1	Year 2	Year 3	Year 4	Total	Retention 1-2	Retention 2-3	Retention 3-4
R) Library Science								
1965	-				-			
1966	-				-			
1967	-				-			
1968	42				42			
1969	40				40			
S) Medicine								
1965	101	81	75	58	315	-	-	-
1966	104	93	79	74	350	0.921	0.975	0.984
1967	108	95	93	78	374	0.913	1.000	0.987
1968	108	105	96	91	400	0.972	1.010	0.978
1969	113	106	103	98	420	0.981	0.981	1.021
(T) Post-Graduate								
1969	36	40	42	46	(+) 164 58			
(U) Professional Totals								
1965	238	170	160	109	677			
1966	227	213	167	126	733			
1967	257	204	209	113	783			
1968	319	230	198	144	891			
1969	374	295	268	187	1,124			

(V) University Totals	1	2	3	4	Other	Total
1965	3,039	2,732	2,098	916	321	9,106
1966	3,423	2,970	2,391	1,020	378	10,182
1967	3,788	3,384	2,624 *(2,644)	1,148	479	11,423 (11,443)
1968	4,688	3,799	2,987	1,335	647	13,456
1969	5,055	4,552	3,364	1,747	535	15,253

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* [illegible] incorrectly. Correct total in [illegible]

** [illegible] is mine. Not in table.

S[illegible]: Office of Institutional [illegible]

Section 5: Salaries and Wages of University Personnel

The median salary in Canada was $13,265 for all full-time staff in 1969-70. Medians by rank ranged from a high of $24,067 for deans, to $9,441 for lecturers and instructors. The median salary for men in 1969-70 was $13,593, higher by $2,698 than that for women.

The median salary tended to decrease as the size of the institution decreased. For all staff at institutions with 5,000 and over full-time students, the average salary was $13,499 in 1969-70.

The median salary for staff at state (provincial or federal) institutions was $13,375 and $13,405 for all independent institutions in 1969-70.

In 1969-70, of the total of 21,840 teachers included from 65 institutions, D.B.S. reports 86.9 per cent were men. Compare this with 1957-58 when 89.3 per cent of staff members were men. Could this be an indication of the trend towards more equality?

Of the institutions having reported to D.B.S. in 1969-70, 3.7 per cent of the staff was aged 60 or older. The median age for all staff was 37 years compared with 38 years in 1968-69.

Where highest earned university degree for 1969-70 staff members is considered, 50.2 per cent were reported to have doctorates, 33.2 per cent master's, 6.0 per cent a first professional degree beyond a first baccalaureate, 9.4 per cent a first baccalaureate, and 1.2 per cent no university degree.

Again, I must urge caution when interpreting data. Not all Canadian institutions of higher education are included. Those omitted are almost all small (less than 500 students enrolled) and many employ religious personnel who normally have a lower pay scale than do lay persons. Also, note that the median is not an arithmetic average, but the mid-point of a distribution. The standards for determining academic status (professor, associate professor, assistant professor, lecturer, etc.) may not be consistent for each university.

All salary data refers to basic annual salary rates and does not include extra income received from evening, extension or summer classes.

Universities, Colleges and Other Schools - Ending June 1970
Salaries and Wages

TABLE 5-16

Explanation	Total	NFLD	PEI	N.S.	N.B.	Quebec	Ontario	Manitoba	[illegible]	[illegible]	[illegible]
Number of Salary Earners(1)	9,916	588	168	1,474	448	1,413	2,889	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	916,703	3,384,455	[illegible]	2,032,926	[illegible]	[illegible]	[illegible]
[illegible]	1,464	-	-	686	50	16	191	167	[illegible]	[illegible]	[illegible]
[illegible]	1,285,550	-	309	164,403	14,788	21,901	245,830	394,621	[illegible]	[illegible]	[illegible]

Source: DBS Catalogue No. 72-007 Ending June 1970

(1) Salary earners are employees in receipt of a salary based on monthly or annual rates of pay.

(2) Wage earners are employees in receipt of a wage based on hourly, daily, or weekly rates of pay.

[illegible]

		[illegible]	[illegible]	[illegible]	[illegible]
U of A	Prof.	[illegible]	$16,600	[illegible]	[illegible]
	Assoc. Prof.	[illegible]	12,500	[illegible]	[illegible]
	Asst. Prof.	[illegible]	9,000	[illegible]	[illegible]
	Lecturer	[illegible]	6,725	7,050	[illegible]
U B C	Prof.	14,000	15,200	15,200	[illegible]
	Assoc. Prof.	11,000	11,300	11,300	[illegible]
	Asst. Prof.	9,000	9,200	9,200	[illegible]
	Lecturer	7,000	7,500	7,500	[illegible]
U of Cal.	Prof.	15,225	16,600	[illegible]	[illegible]
	Assoc. Prof.	11,475	12,500	[illegible]	[illegible]
	Asst. Prof.	8,325	9,000	[illegible]	[illegible]
	Lecturer	6,125	6,725	[illegible]	[illegible]
Carleton	Prof.	13,800	15,000	[illegible]	[illegible]
	Assoc. Prof.	10,500	11,300	[illegible]	12,600
	Asst. Prof.	8,300	9,000	[illegible]	10,000
	Lecturer	None	-	-	-
Laval	Prof.	12,030	12,470	13,180	15,633
	Assoc. Prof.	10,090	10,460	11,060	12,687
	Asst. Prof.	8,480	8,790	9,350	10,500
	Lecturer	6,500	6,750	7,000	7,275
U of M	Prof.	14,500	15,200	15,700	16,500
	Assoc. Prof.	11,000	11,600	12,000	12,500
	Asst. Prof.	8,500	9,000	9,300	9,700
	Lecturer	8,499(2)	-	(2)	-
McGill	Prof.	14,000	15,000	16,000	16,820
	Assoc. Prof.	11,000	11,700	12,500	13,140
	Asst. Prof.	8,300	9,000	9,600	10,100
	Lecturer	6,800	7,500	8,000	8,400
McMaster	Prof.	[illegible]	15,000	15,500	16,500
	Assoc. Prof.	10,500	11,500	12,000	13,000
	Asst. Prof.	8,000	9,000	9,500	10,250
	Lecturer	6,000	7,000	7,000	7,500
U of Montreal	Prof.	14,000	14,700	16,000	16,800
	Assoc. Prof.	11,000	11,700	12,700	13,350
	Asst. Prof.	8,300	9,000	9,700	10,200
	Lecturer	6,700	7,300	7,800	8,200
U of Ottawa	Prof.	12,500	14,375	15,093	15,700
	Assoc. Prof.	10,000	11,500	12,075	12,560
	Asst. Prof.	7,600	8,740	9,177	9,550
	Lecturer	6,000	6,900	7,245	7,540
[illegible]	Prof.	[illegible]	15,500	15,800	17,200
	Assoc. Prof.	[illegible]	12,000	12,300	13,500
	Asst. Prof.	[illegible]	9,200	9,500	10,300
	Lecturer	[illegible]	-	-	-
[illegible]	Prof.	[illegible]	16,000	[illegible]	[illegible]
	Assoc. Prof.	11,500	[illegible]	[illegible]	[illegible]
	Asst. Prof.	[illegible]	[illegible]	[illegible]	[illegible]
	Lecturer	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	Prof.	[illegible]	[illegible]	[illegible]	[illegible]
	Assoc. Prof.	[illegible]	[illegible]	[illegible]	[illegible]
	Asst. Prof.	[illegible]	[illegible]	[illegible]	[illegible]
	Lecturer	[illegible]	[illegible]	[illegible]	[illegible]

TABLE 5-19 continued

	May 1966-67	1967-68	1968-69	1969-70
Simon Fraser Prof.	$14,000	$14,000	$15,800	$15,800
Assoc. Prof.	11,000	11,000	11,700	11,700
Asst. Prof.	9,000	9,000	9,500	9,500
Lecturer	7,000	7,000	7,800	7,800
Sir George Williams				
Prof.	14,000	15,000	15,500	[illegible]
Assoc. Prof.	11,000	11,000	12,500	[illegible]
Asst. Prof.	8,500	8,500	9,500	10,000
Lecturer	6,800	7,000	8,300	8,500
U of T Prof.	14,000	15,200	16,000	16,500
Assoc. Prof.	10,500	11,300	12,300	13,500
Asst. Prof.	8,500	9,200	9,500	10,000
Lecturer	7,000	7,500	7,600	8,200
U of Waterloo Prof.	13,500	15,000	15,000	17,200
Assoc. Prof.	10,000	11,000	11,000	13,500
Asst. Prof.	7,800	8,500	8,500	10,400
Lecturer	6,200	6,500	6,500	7,670
York Prof.	14,000	15,000	15,600	16,800
Assoc. Prof.	10,500	11,200	11,600	12,700
Asst. Prof.	8,500	9,100	9,500	10,500
Lecturer	6,000	6,000	7,500	8,300
Western Prof.	13,500	15,000	15,000	16,400
Assoc. Prof.	10,500	11,500	11,500	12,200
Asst. Prof.	8,500	9,100	9,500	10,000
Lecturer	7,000	7,500	7,500	7,900

Source: DBS Bulletin

(1) Maximum figures were not used because frequently no maximum i[illegible].

([illegible]) This is a maximum salary, no minimum [illegible].

[illegible]

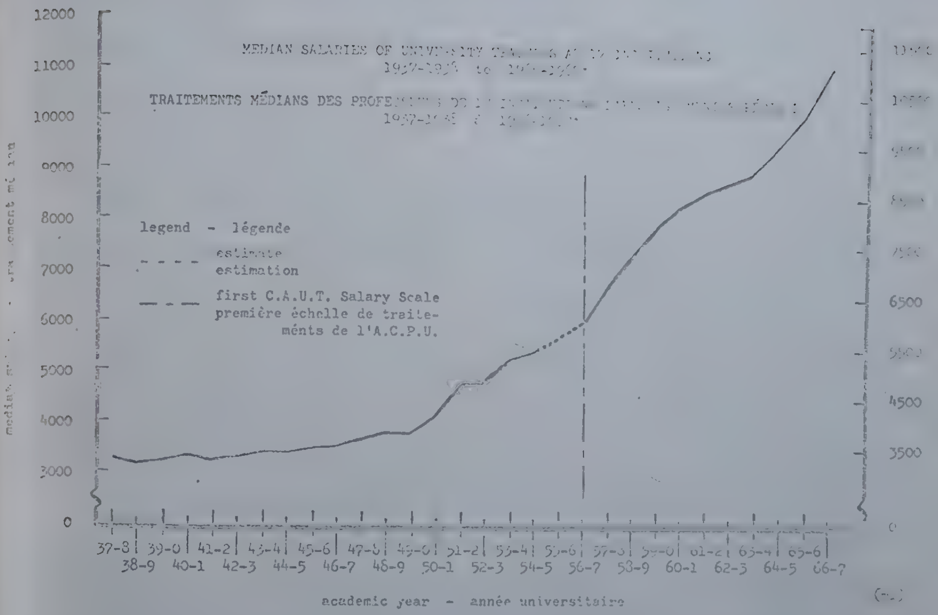
Median Salaries(1) of Full-time Teaching Staffs(2) at 19 Universities(3), by Rank and Region, 1968-69

Rank and region	Number included	Median salary - $100 intervals 1969-70	1968-69	1967-68	1966-67	1965-66
Deans						
Atlantic Provinces	22	19,550	19,450	17,595	16,375	15,00[illegible]
Central Canada	78	24,358*	24,300	23,084	20,500	19,150
Western Provinces	66	25,025	23,600	22,100	20,393	19,0[illegible]
Total	166	24,067	23,450	22,042	20,107	18,556
Professors(4)						
Atlantic Provinces	182	17,750	16,554	15,262	14,229	12,531
Central Canada	1,097	19,782*	19,438	18,072	16,373	15,102
Western Provinces	835	20,066	18,732	17,667	16,323	15,210
Total	2,114	19,870	18,982	17,743	16,201	14,981
Associate professors						
Atlantic Provinces	238	13,827	12,983	12,071	10,984	9,779
Central Canada	1,298	15,062*	14,218	13,451	12,217	11,050
Western Provinces	1,340	15,039	14,067	13,620	12,726	11,995
Total	2,876	15,012	14,207	13,394	12,345	11,435
Assistant professors						
Atlantic Provinces	425	11,006	10,276	9,560	9,027	8,050
Central Canada	1,534	11,928*	11,188	10,636	9,546	8,715
Western Provinces	1,668	11,836	11,202	10,595	9,834	9,345
Total	3,467	11,837	11,078	10,513	9,629	8,957
Lecturers and instructors						
Atlantic Provinces	202	8,718	8,233	7,590	7,152	6,449
Central Canada	629	9,663*	8,009	8,376	7,694	7,079
Western Provinces	508	9,268	8,552	8,200	7,633	7,423
Total	1,339	9,441	8,681	8,229	7,604	7,159
All ranks(5)						
Atlantic Provinces	1,074	11,535	11,214	10,340	9,844	8,902
Central Canada	4,778	13,523*	13,368	12,476	11,419	10,283
Western Provinces	4,502	13,288	12,775	12,047	11,219	10,585
Total	10,354	13,265	12,847	12,061	11,175	10,250

(1) Medians calculated from salary intervals of $100.
(2) Religious staff paid on a scale less than that for lay staff are excluded.
(3) Institutions included: Atlantic Provinces: Acadia, Dalhousie, St. Francois Xavier, Mount Allison, New Brunswick;
Central Canada: Bishop's McGill, Queen's, Toronto, Tri [illegible]
Victoria, McMaster, Western Ontario, O [illegible]
Institute for Studies i [illegible]
in Toronto prior to [illegible]:
Western Provinces: [illegible]
(4) [illegible] department heads.
(5) [illegible] 217 ungraded professors not included [illegible]
[illegible] in Central Canada, and [illegible].
[illegible] of Quebec and Ontario [illegible]

[illegible] Catalogue No. 81-201 ([illegible])
81-203 ([illegible])

TABLE 5-21



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* *The group of 17 institutions, surveyed annually by D.B.S since 1937-1938, was increased to 19 for 1966-1967.*

* Depuis 1938-1939, le B.F.S. publie annuellement les traitements médians des professeurs de 17 institutions. Ce nombre passe à 19 en 1966-1967.

Section 6: Canadian Universities: [illegible]

(A) General

A growing population in the province of Alberta [illegible] on all education institutions, and in the post-secondary area particularly. As we as a society continue to demand greater expertise, it follows that we have to extend the opportunity for this expertise to be attained. The opportunity would be in terms of increased use and hence increased costs of universities and colleges. Several factors may influence the prediction that operating costs will increase, these factors include: an increase in successful high school matriculants, an increase in the number of people leaving the labour force to return to school, and that financial and social barriers are becoming less of a deterrent factor.

Alberta experienced a record high birth rate in 1952-53, whose total impact on post-secondary education will be experienced 16 - 24 years later, between 1969 and 1977. During this period a growth in the participation rate for Alberta can be expected.[2] The 18-24 age group provides a good indication of demand for post-secondary education. In 1967-68, 11.2 per cent of this group were enrolled in universities; this closely followed the Canadian average.

As the size of universities increase, the cost of university education increases. This is borne out by the fact that after schools reach some minimum efficient size that allows them to support the initial sub-structure and spread out the initial investment, costs per student begin to rise as the size of the institution increases. This does not necessarily indicate mal-administration or diseconomies of scale, but rather serves to indicate that universities, colleges, etc. can be compared to a multi-product firm with no decrease in marginal cost once a certain minimum efficient size is attained.

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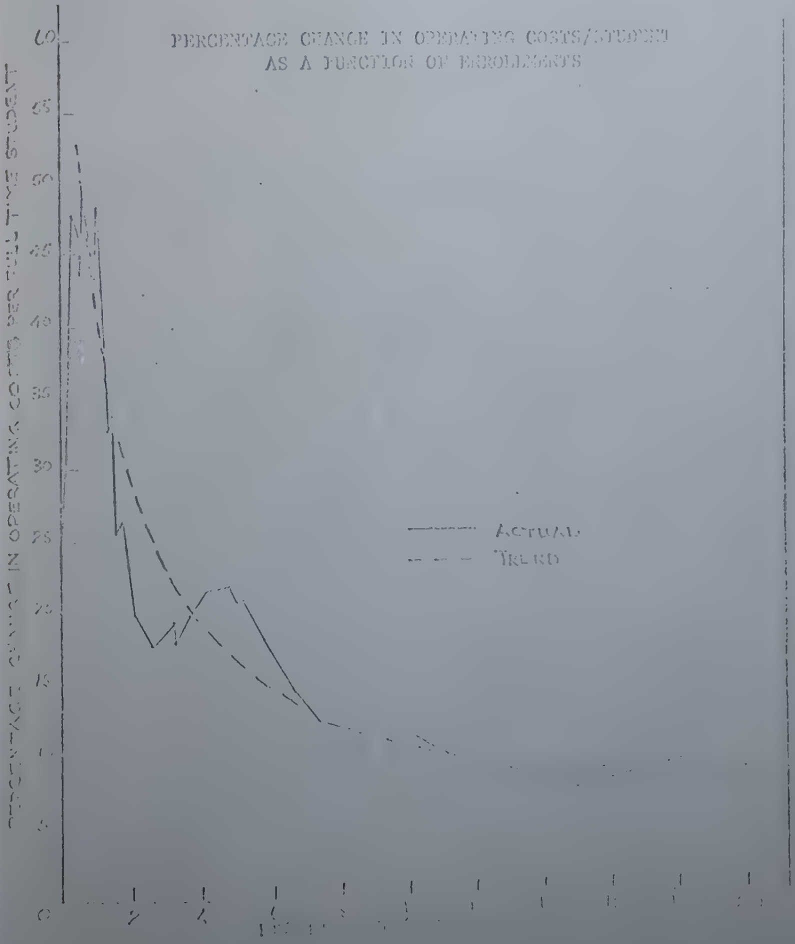
[2] Alberta has one of the [illegible] that it also has one of the [illegible] participation rate is likely [illegible]

Consideration also must be given to the [illegible] schools, eg. honours programs, graduate pr[illegible] these programs require expensive laboratories, [illegible] highly trained, specialized personnel. There is also the problem of researc costs to consider. Facilities for research require greater amounts of funds and hence have to be regarded as an "add on" cost through which no economics of scale may be realized.

Below is a chart illustrating the trend of operating costs as the population of a university changes.

TABLE 6-22



The relative increase in per student costs begin to decelerate after a University reaches the 1,200 - 1,600 level in enrolments. As the size of the University increases there is a marked deceleration in the rise of per student costs until 10,000 - 12,000 students is reached. As the university continues to grow beyond this size, operating costs increase at a fairly steady rate of 7.5 to 10 per cent per year.

The short table that follows indicates the projected population of the 18-24 age group and its expected growth.[3]

	Pop. ('000's)	Pop. 18-24	Pop. Growth %	Part. Rate (Pop. 18-24) %	Actual Part.	Part. Rate (Totl Pop.) %
1968-69	1,547	174	-	13.3	23,200	1.5
-70	1,577	179	2.9	16.5	29,480	1.9
-71	1,608	184	2.8	20.3	37,340	2.3
-72	1,640	192	4.3	24.4	46,763	2.9

Dr. Eric J. Hanson states in the Alberta Teachers' Association Research Monograph #14, that expenditures on post-secondary educational systems are presently expanding at rates several times those of the total population growth. He goes on to say that secondary educational systems cannot any longer be neglected without seriously hindering the advancement of our post-secondary systems and retarding the future growth rate of the economy.

A good deal of discussion today has centered around "sales taxes" as an alternative means of off-setting rising education costs, and it would seem apparent that the public is psychologically and financially prepared to pay for it.

In a position paper prepared by Hanson and Atherton, for the Commission on Educational Planning, they state that an increase in the income tax base is perhaps the best way of providing for increases in the quality and quantity of education in the future. They estimate that increased fees may eventually constitute 20-25% of total revenue. Financial returns to individuals investing

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[3] The above information was taken from the Second [illegible] Universities Comparative Cost Analysis Study, Budget Bureau, Fall/[illegible].

in a university education are so high that they warrant considerably more investment by the individual in his education. Because opportunity and maintenance costs can become a real deterrent to individuals who are in socio-economic groups possibly unable to afford university education, fees should be increased only on the provision that long term loans to students be made available in slightly greater quantities than is now provided.

At a recent meeting in Camrose, L. A. Thorssen, Chairman of the Alberta Universities Commission, stated that he fully expects university costs to escalate. He also contended universities have grown so fast in the past five years than even people within the institutions have had difficulty making forecasts!

One researcher recommends that governments pay more of the cost of university education, eliminating the need for students to deprive other people of jobs. This in fact may be a real consideration at some later point in time when semester systems become universal. One survey indicated that 58.5 percent of students earned less than $999 during the summer; and that 81.5 percent of the students answering questionnaires indicated that the money that they had saved from summer employment was not sufficient to enable them to continue their studies. They depend upon government assistance. With this in mind, I would like to recommend that the present $1,600 maximum loan and/or grant be increased to $2,000 maximum, with no provision for grants or bursaries; and that similar changes be made in other governmental assistance. This will enable more people to attend university yet relieve the government, in the long run, of some direct costs.

It is imperative that serious consideration be given to the increased usage of schools. Efforts must be made to increase community use of the facilities that are available in our education system, and that this use be extended for a twelve month period. Perhaps, the rescheduling of classes would play a role in making facility usage more efficient.

Speaking more specifically, the immediate area surrounding Red Deer Junior College presents itself as a possible university site in years to come.

I suggest sincere efforts be made to study the feasibility [illegible] the surrounding land as a possible site for Alberta's [illegible]

Accountability in the Administration of Education[1]

Nothing arouses the ire of administrators of a school or university faster than criticism of the cost of education, a few immediately spring to the defense of the budget, usually without much reason or logic, on the grounds that they have little enough to operate their system on. [illegible] to innovate or perish has certainly caused a frenzy of activity in educational circles with the result that we must be prepared [illegible] and innovate, and to keep education abreast of the needs of society. At the same time we have to relate all existing programs or questions to cover long term objectives in order to evaluate their educational record to the st[illegible] to the public.

Accountability and responsibility in the administration of education implies outstanding leadership and an awareness that education today is big business. Goals and objectives such as long range planning, mid range planning, and short range plans must be established, and [illegible] on a continual basis. It is my opinion that long range plans are indeed lacking. The public is demanding tangible results for the dollars invested in education, to meet this challenge the administrator must apply a dependable system of evaluation which is directly related to performance of objectives. This is not a one man job but an exercise that involves administrative and supervisory personnel. It is not an exercise that is wholly objective but one that necessitates considerable amounts of professional judgment.

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[1] Partially taken from an address [illegible] Peel County, Ontario.

In planning for the future, employee participation, planning, and decision making, accountability for performance, decentralization in decision making, and student participation become important elements in the process. Our task may be one of re-ordering the educational enterprise, particularly post-secondary education, and to limit tendencies establishing rigid bureaucratic institutionalization which underlines the basic purposes of the organization, so they cannot be hidden by a mountain of proliferating and restrictive regulations. Our challenge is to re-think our educational priorities to put them in long range perspectives and to sort out and confirm the manifold objectives of our system so that we can maximize the personal, social, and intellectual growth of our people.

Contribution of Education to Economic Growth

"It is universally recognized that education enchances the quality of life of individuals, as well as the quality and energy of a whole society. Relationships between education and economic growth has only recently become the object of empirical research, most of which has been carried out in the United States. Education is one of these significant variables in economic growth".[5]

Estimates of educational attainment for the male labor force in 1961 is depicted below.

TABLE 6-23

Estimates of Educational Attainment of Male Labour Force, 25–64 Years of Age, 1911–61 (5)
(Thousands)

	Total	Elementary School 0–4 Years	Elementary School 5–8 Years	High School 1–3 Years	High School 4 Years	University Some University[1]	University Complete University
61 Gross labour force	3,717	280	1,428	1,103	[illegible]	376	[illegible]
Net of 1951–61 migration	3,453	264	1,[illegible]	1,021	[illegible]	348	[illegible]
51 Gross labour force	3,029	329	1,[illegible]	801	[illegible]	228	1[illegible]
N[illegible]-51 migration	2,954	322	[illegible]	780	[illegible]	[illegible]	1[illegible]
41 G[illegible] force	[illegible]	364	1,1[illegible]	[illegible]	[illegible]	1[illegible]	[illegible]
N[illegible] migration	2,512	363	1,[illegible]	581	[illegible]	1[illegible]	1[illegible]
31 G[illegible] force	2,085	379	1,[illegible]	426	[illegible]	[illegible]	7[illegible]
N[illegible] migration	2,129	[illegible]	1,[illegible]	[illegible]	[illegible]	5[illegible]	[illegible]
21 G[illegible] force	1,[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
N[illegible] 1911–21 migration	1,[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
11 G[illegible] force	[illegible]	[illegible]	7[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible] 13 for provinces in which it was given for [illegible]

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5. [illegible]ic Council of [illegible]

It is evident from this table that more and more people are attending and completing university. Also noteworthy is the fact that the minimum years of schooling in Canada has increased substantially.

There have been sizable increases in both the median and the mean years of schooling for the male labor force over the period 1911-61 although the change was considerable less in Canada than in the United States. Median years of schooling for the Canadian labor force increased 27.5 percent over the entire period (Table below). It is apparent that improving the general level of education is a slow process, requiring thus far, an average of about 25 years to raise the median one year.

TABLE 6-24

Median Years of Schooling, Males
Canada 1911-61 and United States 1910-62(5)
(Canadian labour force, aged 25-64; U.S. population , 25 years and over)

Years	Canada	Years	United States
	(Median year of schooling)		(Median year of schooling)
1911	7.35	1910	7.41
1921	7.75	1920	7.68
1931	8.04	1930	8.01
1941	8.43	1940	8.55
1951	9.74	1950	9.00
1961	9.37	1960	10.30
		1962	11.10

Some knowledge of the attainment of university education by the labour force in Canada and the United States can be gained by comparing the achievement of different age groups within the labor force. For the oldest age group (55-64 years) the proportions who achieved university degrees were not very far apart in the two countries, Canada having 4.2 percent as of 1961 and the United States 7.0 percent as of 1960. For the 25-34 age group comparison, the difference in the proportion with university degrees is far greater, with Canada having 6.0 percent as of 1961 and the United States reaching 14.7 percent in 1960 (Table next page). The absolute differences between the proportions in the two countries appear to have about doubled over the 30 years from around the early 1920's to around the early 1950's.

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[5] Ibid

TABLE 6-25

Estimates of Years of University Education(5)
Attained by Males Aged 25-64, Canada 1961 and United States 1960
(1961 Canadian labour force; 1960 U.S. population)

Canada	Percent of male labour force
Grade 13 high school	6.17
Highest year of university attained:	
First	[illegible]
Second	1.05
Third	0.88
Degree	5.59
Total	15.69

United States	[illegible]
Highest year of university attained:	
First	3.42
Second	[illegible]
Third	1.87
Degree	10.64
Total	19.90

An interesting side affect of education can be seen in historical records which show that total output per employed person has increased by 1.67 percent per year from 1911 to 1961. Improved education of the labor force has raised average labor productivity at the rate of 0.52 percent per year over the same period.[5] Given the labor share, improved education has thus contributed almost one quarter to the productivity growth per employed person from 1911 to 1961!

The evidence in Canada also points to a close re[illegible] person's education and [illegible]

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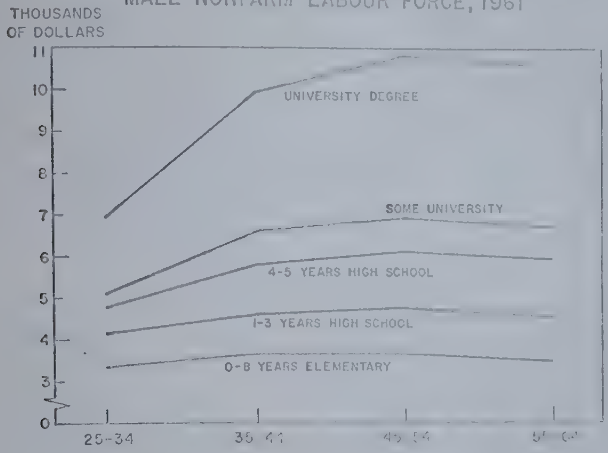
[5] Ibid

TABLE 6-26

INCOMES BY AGE GROUP AND EDUCATION LEVEL
MALE NONFARM LABOUR FORCE, 1961



Source: Dominion Bureau of Statistics,
1961 Census of Canada (Catalogue 98-502, Table B-6).

Bertram suggests the social rate of return on university education is 8 - 11% per annum in the United States. This rate would not be dissimilar for Canada.

Further education provides the individual with not only a larger life-time income, but "opportunity options" to allow hedging against the vicissitudes of technology.

Over the period 1911-61, the contribution of education is estimated as accounting for 12 percent of the growth in national income, while in the period 1929-57 the contribution of education to the growth in national income was estimated as 11.4 percent.[6] In the U.S., the contribution of education to the growth of national income over the 1929-57 period was estimated by E. Denison as 23 percent, approximately double the Canadian f[illegible]

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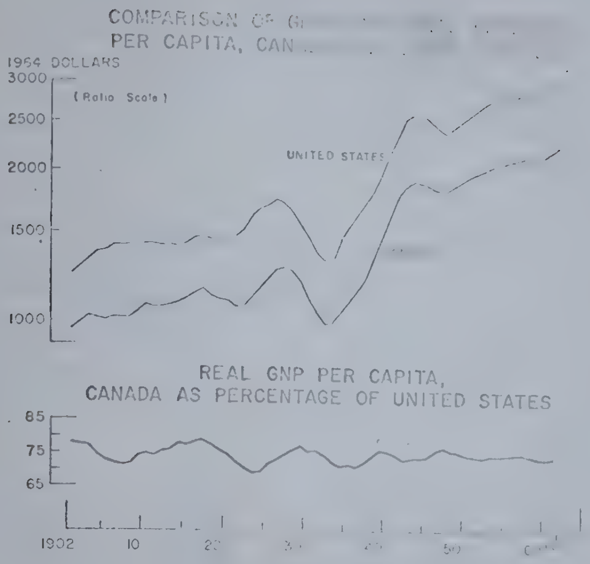
[6] The underlying figures for 19[illegible] national income (actually [illegible]); [illegible] income based on total days [illegible] 1929-57, average annual rate [illegible] average annual rate of [illegible] .5[illegible]; labour coefficient, .7[illegible]

TABLE 6-27



That Threat of Increasing Numbers and Costs in P[illegible]

There are a number of causes which have contributed to the spectacular rise in educational enrolments over the past decade, they include: the increased post-war birth rate, widening of the secondary school cirriculum which resulted in an increase in the retention rate, greater acceptability into university, colleges with a wide variety of courses leading to a wider and freer choice. Transcending all of these is the great Canadian dream of upward social mobility which is attached to a diploma or a degree.

Dr. Wisenthal states that an examination of enrolment growth over the past decade reveals that "educational enterprise has grown to be Canada's largest industry". "In all of Canada, one in three people is engaged in formal education at some level or in some capacity." This says nothing of the growing army of students enroled in part-time education, and of p[illegible] the teachers.

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7 Dr. M. Wisenthal, Director, [illegible]
Conference Sponsored by [illegible]
[illegible] October 19 - 2[illegible], 19[illegible]

From 1961 - 69 post-seconda

over 250 percent. The most

of students seeking post-

actual post-secondary full-time enrolm

and projects to 1980.

POST-SECONDARY

[illegible]

Enrolment (Full-Time)

	1961	1962	1963	1964	1965	1966	1967	[illegible]	[illegible]
					'000				
Non-University	64.7	70.5	74.1	74.0	84.4	94.0	111.2	151.9	[illegible]
University:									
Undergraduate	121.5	133.0	147.3	164.4	188.7	213.0	237.0	244.0	[illegible]
Graduate	7.3	8.4	11.1	13.8	17.2	19.7	24.2	26.1	[illegible]
Total University	128.8	141.4	158.4	178.2	205.9	232.7	261.2	270.1	[illegible]
Grand Total	193.5	211.9	232.5	252.2	290.3	326.7	372.4	422.0	[illegible]

	1970	1971	1972	1973	1974	1975	1976	1977	1978	[illegible]	[illegible]
Non-University	198.6	212.4	223.8	244.4	269.0	290.0	309.3	329.7	346.3	366.4	380.0
University:											
Undergraduate	296.1	329.4	386.4	417.4	457.7	493.8	527.8	560.0	585.6	616.7	638.4
Graduate	33.7	37.7	46.6	53.1	58.8	66.2	74.1	84.6	95.3	102.4	111.6
Total University	329.8	367.1	433.0	470.5	516.5	560.0	601.9	644.6	680.9	719.1	750.0
Grand Total	528.4	579.5	656.8	714.9	785.5	850.0	911.2	974.3	1,027.2	1,085.5	1,130.0

* Source: Enrolment 1961-67 and 1972 to 1980 Staff Study No. 25
1968-71 Advance Statistics

The next table shows the extent [illegible] the [illegible] participated in post-secondary education and the levels to [illegible] participation could rise by 19[illegible] enrolment in post-secondary education continues to accelerate at th[illegible] which is anticipated by [illegible] it is entirely possible that more than 50 percent of the eight[illegible] to twenty-one year age group will be in some form of full-time post-secondary education by 1980.

TABLE 6-29

PERCENTAGE OF SELECTED AGE GROUPS

[illegible]

[illegible]

	1961	1962	1963	1964	1965	[illegible]	[illegible]	[illegible]	[illegible]
Non-University 18-21	6.4	6.6	6.6	6.3	6.8	6.9	[illegible]	[illegible]	[illegible]
University:									
18-21 Undergraduate	12.0	12.5	13.2	13.9	15.2	[illegible]	[illegible]	16.4	[illegible]
22-24 Graduate	1.1	1.2	1.5	1.8	2.2	2.4	[illegible]	[illegible]	2.9
18-24 Total University	7.5	8.0	8.6	9.2	10.1	10.6	[illegible]	[illegible]	[illegible]
Grand Total 18-24	11.3	12.0	12.6	13.0	14.2	14.9	16.1	17.4	18.9

	1970	1971	1972	1973	1974	1975	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Non-University 18-21	12.9	13.5	13.7	14.4	15.2	15.9	16.7	17.4	18.2	18.9	[illegible]
University:											
18-21 Undergraduate	19.3	20.9	23.6	24.7	25.8	27.1	28.5	29.6	30.7	31.7	[illegible]
22-24 Graduate	3.1	3.3	4.0	4.5	4.9	5.4	5.8	6.3	6.8	7.2	7.7
18-24 Total University	12.5	13.5	15.5	16.4	17.4	18.3	19.2	19.9	20.6	21.4	22.1
Grand Total 18-24	20.0	21.3	23.5	24.9	26.4	27.8	29.1	30.2	31.0	32.3	33.2

It is readily apparent th [illegible]
the cash flow (in education) is [illegible]
single industry in Canada. [illegible]
collected from all sources by [illegible]
countries in the world can point [illegible]
to education.

TABLE 6-30

POST-SECONDARY
EXPENDITURE AS A PERCENTAGE OF GNP

'000

CURRENT DOLLARS

	1961	1962	1963	1964	1965	1966	1967	1968	[illegible]	[illegible]	[illegible]
Gross National Product	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Post-secondary Expenditure											
Non-university	71,007	81,731	88,893	94,976	115,233	133,493	164,877	229,936	[illegible]	[illegible]	[illegible]
University	211,350	244,015	289,931	[illegible]	432,332	[illegible]	738,510	886,089	[illegible]	[illegible]	[illegible]
Total Post-secondary	282,357	325,746	378,824	[illegible]	547,565	[illegible]	903,387	1,116,025	[illegible]	[illegible]	[illegible]
Total Post-secondary Expenditure as a % of GNP	0.72	0.77	0.83	0.88	1.00	1.16	1.38	1.57	[illegible]	[illegible]	[illegible]

Source: Perspective 1975, Economic Council of Canada

* Assumes average annual percentage change of 5.5% from 1969 to 1980

Education Finance Statistics and Selected
Related Data: Canada, 1961-1969

	1961	1962	1963	1964	1965	1966	1967	1968	1969
					'000				
(i) Expenditure on Education	1,889.9	2,308.2	2,484.5	2,817.9	3,345.6	4,048.8	4,928.1	[illegible]	[illegible]
(ii) Gross National Product	39,080	42,353	45,465	49,783	54,897	61,421	65,608	[illegible]	[illegible]
(iii) Total Personal Income	29,411	31,966	34,109	36,618	40,591	45,702	50,207	[illegible]	[illegible]
(iv) Expenditure on Education as a percentage of GNP	4.8	5.4	5.5	5.7	6.1	6.6	7.5	8.0	[illegible]
(v) Expenditures on Education as a percentage of total Personal Income	6.4	7.2	7.3	7.7	8.2	8.9	9.5	10.3	[illegible]
(vi) Expenditures on Education Per Capita	104	124	131	146	170	202	242	274	[illegible]
(vii) Expenditures on Education as a percentage of net government expenditure	14.3	16.3	16.3	17.1	18.5	19.1	20.7	20.9	21.0

TABLE 6–32

—POPULATION, LABOUR FORCE, AND GNP, CANADA ACTUAL 1951 AND 1966; PROJECTIONS FOR 1981

	1951 (a)	*1966 (a)*	*1981 (b)*	*Total percentage growth*		*Annual average percentage growth*	
				1951-66	*1966-81*	*1951-66*	*1966-81*
Population (000's)	14,009	20,015	25,600	43	28	2.4	1.7
Civilian Labour Force (000's)							
Total	5,223	7,420	10,950	42	48	2.4	2.7
Employed	5,097	7,152	10,700	40	50	2.3	2.7
Total GNP (millions of $)							
Current $	21,170	58,120	175,000	175	201	7.0	7.6
Constant (1949) $	18,547	36,028	70,000	94	94	4.5	4.5
GNP Per Capita							
Current $	1,511	2,904	6,835	92	135	4.4	5.8
Constant (1949) $	1,324	1,800	2,735	36	52	2.1	2.8
GNP Per Employed Worker							
Current $	4,153	8,126	16,350	96	101	4.6	4.7
Constant (1949) $	3,639	5,037	6,540	38	30	2.2	1.8
Implicit Price Index of GNP 1949 = 100	114.1	161.3	250.0	41	55	2.3	3.0

(a) Data from DBS, *National Accounts, Income and Expenditure, 1926-56 and 1967*, with labour force figures for 1951 from Bank of Canada, *Statistical Summary, Supplement, 1963.*

(b) These are projections. The population estimate is based upon the medium projection of the Economic Council of Canada, *The Canadian Economy from the 1950's to 1970's, Fourth Annual Review*, Ottawa, September, 1967, p. 57. The labour force estimates are derived from data in the same source, pp. 71-72.

Source: ATA [illegible]

It will be noted that tota [illegible] greater than they were [illegible] 1961 w[illegible] two and half times that of [illegible] have risen by a factor of ne[illegible] will rise in a more or le[illegible] by 1980 first year student costs [illegible] five and half times gre[illegible]

TABLE 6-33

POST-SECONDARY

EDUCATION FINANCE* STATISTICS FROM 1961-69 ACTUAL, PROJECTED [illegible]

Total Cost

Current dollars in thousands

	[illegible]	1962	1963	1964	1965	1966	1967	[illegible]	[illegible]
Non-university	71,007	81,731	88,893	94,976	115,233	133,493	164,877	229,[illegible]	[illegible]
University	211,330	244,015	289,931	345,222	432,332	579,215	738,510	888,[illegible]	[illegible]
Total: Post-secondary	282,337	325,746	378,824	440,198	547,565	712,708	903,387	1,118,[illegible]	[illegible]

	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1975	1976	1977	[illegible]	[illegible]	[illegible]
Non-university	354,700	412,561	474,496	568,474	689,985	808,520	956,251	1,083,394	1,253,667	1,473,502	[illegible]
University	1,293,476	1,568,905	2,012,900	2,378,700	2,837,800	3,343,700	3,902,300	4,537,100	5,200,400	5,900,000	[illegible]
Total: Post-secondary	1,648,176	1,981,466	2,487,396	2,947,174	3,527,785	4,152,220	4,858,551	5,620,494	6,454,067	7,373,502	[illegible]

* Operating Expenditures only

Total Cost: Non-university estimate
University from 1961-67 actual, 1968 preliminary, 1969 estimate,
1970-80 projection.

POST-SECONDARY

Cost per Student

Current dollars

	1961	1962	1963	1964	1965	1966	1967	1968	1969
Non-university	1097	1159	[illegible]	[illegible]	1305	[illegible]	[illegible]	[illegible]	[illegible]
University	[illegible]	[illegible]	[illegible]	[illegible]	2100	[illegible]	[illegible]	[illegible]	[illegible]
Total*: Post-secondary	1459	1537	1629	1745	1886	2182	2426	2649	2861

* Weighted average

	1970	1971	1972	1973	1974	1975	1976	[illegible]	[illegible]	[illegible]	[illegible]
Non-university	1786	1942	2120	2326	2565	2788	3027	[illegible]	3565	3866	4152
University	3922	4274	4648	5056	5494	5971	6484	[illegible]	7637	8204	8902
Total*: Post-secondary	3119	3419	3787	4122	4491	4885	5310	5769	6264	6793	7571

* Operating Expenditures only.

Total Cost: Non-university estimate
University from 1961-67 actual, 1968 preliminary, 1969 estimate,
1970-80 projection.

TABLE 6-34

TABLE 6-35

POST-SECONDARY
EDUCATION FINANCE STATISTICS, PROJECTED 19[illegible]
Total Cost
Constant Dollars (1969) in thousands

	1970	1971	1972	1973	1974	1975	1976	1977	1978	[illegible]	[illegible]
Non-university	337,619	374,036	409,770	437,537	[illegible]	602,710	666,[illegible]	732,[illegible]	755,[illegible]05	[illegible]	[illegible]
University	1,231,003	1,422,513	1,738,239	1,986,157	2,202,[illegible]	2,493,836	2,771,545	3,069,943	3,390,000	3,684,010	[illegible]
Total: Post-secondary	1,569,622	1,796,549	2,148,007	2,423,694	2,762,633	3,096,548	3,438,396	3,802,671	4,145,765	4,523,720	[illegible]

* Operating Expenditures only.

TABLE 6-36

EDUCATION FINANCE* STATISTICS PROJECTED 1970-80

Cost per Student

Constant dollars [illegible]

	1970	[illegible]	[illegible]	1973	1974	1975	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Non-university	1701	1761	[illegible]	1913	2009	2079	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
University	3735	[illegible]	[illegible]	4158	4302	4453	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total: Post-Secondary	2971	3100	3270	3390	3517	3643	[illegible]	3905	4036	[illegible]	[illegible]

* Operating Expenditures only.

It would be impossible within the limited scope of this paper to explore in depth all the implications of the projected enrolments and r costs of education; however, it may be useful to raise some questions abou the possible effects of manpower outputs, and the capacity of our society t develop occupational opportunities for the graduates in the 1980's.

TABLE 6-37

Growth of Selected Variables, Canada

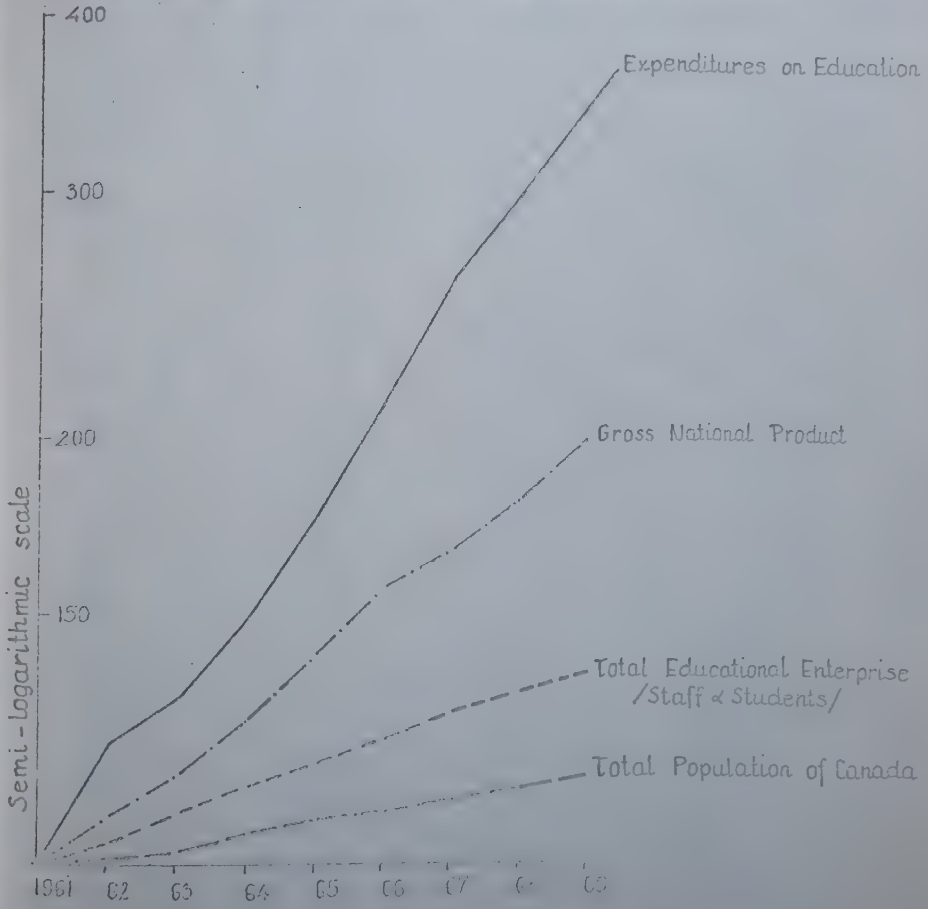


TABLE 6-38

Enrolment and Employment Statistics in Canadian Education, and Some Selected Demographic and Labour Force Statistics; ('000)

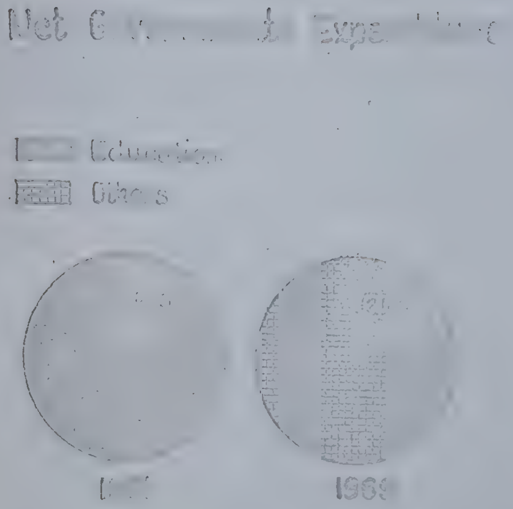
		1961	1962	1963	1964	1965	1966	1967	1968	1969
(i)	Full-time enrolment	4,602	4,800	5,010	5,220	5,408	5,595	5,825	6,000	[illegible]
(ii)	Employment in education	294	315	340	360	389	422	470	515	557
(iii)	Education enterprises (including enrolment and staff) (excludes non-civilians)	4,896	5,115	5,350	5,580	5,797	6,017	6,295	6,515	6,714
(iv)	Total population	18,238	18,583	18,931	19,291	19,644	20,015	20,405	20,744	21,061
(v)	Employed in public administration and defence (exludes non-civilians)	332	342	345	353	362	376	399	408	420
(vi)	Employed in all industries(1) including education	4,682	4,869	5,021	5,264	5,553	5,852	6,036	6,189	6,516
(vii)	Full-time enrolment as a percentage of total population..	25.2	25.8	26.5	27.1	27.5	28.0	28.5	28.9	29.3
(viii)	Employment and education employees as a percentage of total population	26.8	27.5	28.3	28.9	29.5	30.1	30.9	31.4	31.9
(ix)	Labour force of all industries as a percentage of total population	25.7	26.2	26.5	27.3	28.3	29.2	29.6	29.8	30.9

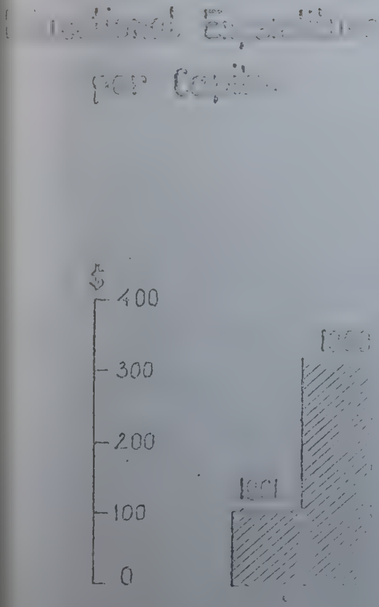
(1) Source: Estimates of Employed by Province and Industry, D.B.S. Cat. No. 72-009, page 18.

It would appear that there is a critical need for immediate examinatic of future skilled manpower needs. Some planning is essential if we are to avoid creating a situation in which literally hundreds and thousands o young graduates face a future of dissatisfaction as a consequence o expectations which do not match the realities they are called upon to [illegible].

It appears that in annual expenditures in 1980, proposed secondar education alone, would be 20% greater than the total cost of all educatio in 1969. This is likely to be beyond the capabilities of our economy. Since total educational expenditures per capita have tripled over the pas decade I ask this question ... Can this rate continue unabated withou sacrificing other important social [illegible]s? Will Canada have to choose between health services, old age pensions, education and/or other [illegible] programs? These are difficult questions and do not easily lend themselves to simple answers. The recent announcement, in Alberta, that some differential treatment will be accorded out of province students is an indication that steps are already being taken to limit growth and escalating costs.

TABLE 6-39


Net G[illegible] Expe[illegible]
Education
Others
1969


per Capita
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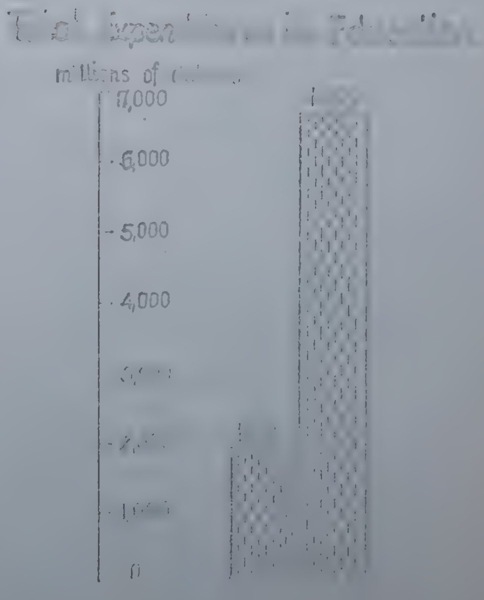
millions of
7,000
6,000
5,000
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[illegible]

As a result of the federal-provincial conference of October 1966 on federal-provincial arrangements and relative financial responsibilities for education, the federal government undertook to provide increased and expanded support to education. Recognizing that education is a provincial responsibility, the federal government decided to discontinue payment directly to universities, in the form of operating grants, which were computed at $2.00 per capita in each province for the fiscal year 1965-66, and at approximately $5.00 per capita for the fiscal tear 1966-67.

Furthermore, recognizing that provinces are required to provide facilities for professional, technical, and vocational education outside of the universities for the steadily increasing student population and the rapidly rising costs of such education, the federal government decided to expand its support beyond that of university education and include in its program almost all post-secondary education in each province (i.e.; the educational institutions and courses requiring for admission at least a junior matriculation or its equivalent).

The provinces were offered the choice of either a federal grant amounting to $15.00 per capita, or 50 percent of operating costs of post-secondary education, whichever is the greater. To implement this proposal, Parliament passed the Federal-Provincial Fiscal Arrangements Act in March of 1967. Under the terms of this Act, the federal treasury transfers to the provinces certain percentages of federal taxes and makes each payment in accordance with the option selected by the province. These transfers of revenue and cash payments will continue for five years, commencing with the 1967-68 fiscal year.

Recent Trends in Canadian Universities

One interesting trend in the last several years is that, actual expenditures on education invariably exceeded estimates. Actual expenditures exceeded estimates by 3.5 percent in 1966, 0.3 percent in 1967 and 0.5 percent in 1968. This trend according to DBS, is caused primarily by the decreasing rate of growth in provincial expenditures on education, by far the largest source of funds. Interestingly enough the provincial share of the total cost of education has increased from 47.9 percent in 1966 to 54.0 percent in 1969, across Canada.

In 1967, expenditures on higher education increased by 25.6 percent over the previous year. Operating expenditures of universities and colleges increased by 27.5 percent, while capital outlays of approximately $358 million were 15.9 percent greater than in 1966. Since full-time enrolment in 1967 increased by only 10.6 percent, the cost per student rose by 15.3 percent.

Total expenditures on education increase faster than the rate of growth of the Gross National Product (GNP), hence the percentage of GNP devoted to education has increased steadily. In 1965 it was 6.4 percent, while in 1966 and 1967 this percentage increased to 7.2 and 7.9 percent, respectively.

In 1968-69 total expenditures for universities showed signs of leveling off, although they still increased faster than the Gross National Product. In 1968-69 they represented 1.55% of the GNP compared with 1.53% the previous year, and 1.03% five years previously.

Canadian universities spent $311.7 million on fixed assets (land, building, equipment and contents) in the 1968-69 academic year. This was [illegible] million (13.0%) less than in 1967-68. It was the first decline since [illegible], and probably indicates the scarcity of funds in Canada for capital purposes.

(B) OPERATING EXPENDITURES

The major factors contributing to the huge increase in total operating expenditures over the past decade are:

(1) Augmented teaching staffs necessitated by increasing enrolments.
(2) Increases in salaries of teaching personnel due to growing demands for suitably trained individuals.
(3) Greatly expanded graduate faculties, research facilities, and services for adult students.
(4) Greater maintenance expenditures required by expanded physical facilities.
(5) Rising prices of labor and materials.

Instruction remains the largest single item of operating expenditure. This varies from approximately 45 to 60 percent of operating costs throughout Canadian universities. The costs of libraries show only a small variation between provinces, the national average constantly being close to 7 percent.

The relative cost of operating small institutions is usually lower than that for larger ones. Salaries of the teaching staff is also often lower than salaries in larger institutions, because concentration is placed on undergraduate programs where costs are invariably less expensive.

Generally speaking, all items (on a per student cost basis) of expenditure are lowest in the Atlantic provinces and highest in Alberta and Ontario. Similarily, costs per full-time student are considerably lower in small and medium sized institutions, with the significant exception of administrative costs which are markedly higher in small and medium sized institutions.[8]

In Ontario, a formula approach to operating grants was implemented in the 1967-68 academic year.[9] Essentially the formula is directly related to enrolment, with a weighting of one, for example, for a student in general arts or science, a weighting of two for an engineering student, and a weighting of three for a master's degree candidate in the humanities or social sciences.

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[8] Dominion Bureau of Statistics defines small institutions as having total operating expenditures of $1.5 million or less; medium sized as being between $1.5 and $5.0 million; and large institutions as having operating expenditures of $5.0 million or more.

A value of the "Basic Income Unit", which reflects current costs of university operation, is multiplied by the actual "weighted enrolment" to determine the total "basic operating income" for each university. From this total the student fees are deducted to arrive at the actual operating grants. To assist those newer universities, additional grants are provided. Below, is a brief summary of operating grants, in Ontario, for 1967-68 and 1968-69.[9]

($000)	1967-68	1968-69
Provincially assisted universities:		
Formula operating grants	$143,650	$191,980
Other grants	19,135	24,370
Grants for principal and interest repayments of capital debentures	15,684	22,762
Program of support for		
Denominational universities and colleges	4,302	4,978
Other institutions	3,256	3,923
Total	$186,027	$248,013

[illegible] on the Minister of University Affairs of Ontario

Total instructional costs, as reported in the Budget Bureau's Second Edmonton University Cost Study, make up 63.6 percent of Lethbridge's operating costs, 68.7 percent of Calgary's and 71.5 percent of Alberta's.

The table below gives an up-to-date picture of university operating grants by province.[10]

University Operating Grants

	$000		
	1970-71	1969-70	Change %
Newfoundland	12,000	9,827	+22
P.E.I.	2,950	2,625	+12
Nova Scotia	29,223	23,000	+26
New Brunswick	19,900	15,523	+28.1
Quebec	142,654	122,400	+16
Ontario	315,236	262,572	+20
Manitoba	35,900	30,750	+16.7
Saskatchewan	28,000	24,000	+16.6
Alberta	79,995	64,744	+23.5
British Columbia	77,000	65,000	+18.4

A few of the more interesting aspects of operating revenues and expenditures are:

(1) In every case, the U of A receives a higher provincial grant per student than any other university.

(2) Alberta over the years has paid an increasing portion of operating costs. More so than for most other provinces.

(3) The trend among all universities is that students' tuition fees are now contributing a smaller proportion of total operating costs.

(4) For the U of A, distribution of expenditures has been very stable. This is generally true for all other universities.

(5) Differing definitions of "academic expenditure", "administrative expenditure" and "other" make it irrelevant to compare proportionate expenditures on these items.

(6) The U of A is very typical in its expenditure per Full Time student. There are several with higher expenditures (Western, Queens), but most hover in the range of $2,500 - $3,000 per student.

[1] The Financial Post, June 1970

Below is a table summarizing the major sources of operating inco in Alberta since 1958 - 59. The most interesting feature is the consistent growth of university operations within this province.

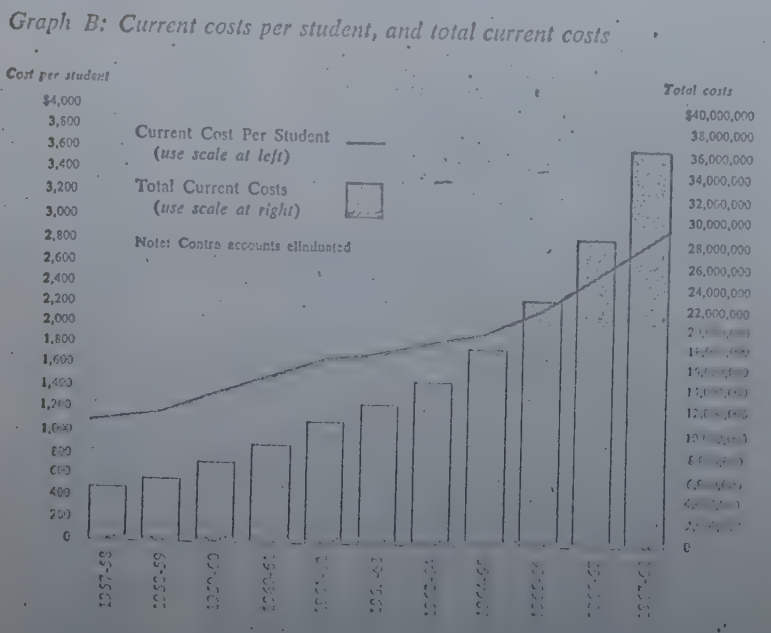
Table 6 - 40

SOURCES OF OPERATING INCOME IN ALBERTA

(From the 1968-69 annual report of The Alberta Universities Commission. The table summarizes some major aspect of the remarkable expansion of university operations in Alberta during the past 10 years. Figures in $000.)

Academic Year	Full-Time Students	Part-Time Students	Fees	Provincial Grant	Federal Grant[1]	Other Revenues[2]	NET Operating Expenditures per Full-time Student
1958-59	5,433	3,628	$ 1,488	$ 3,100	$ 1,745	$ 15	$1,100
59-60	6,021	4,128	1,772	3,947	1,818	18	1,275
60-61	7,150	4,598	2,049	6,000	1,876	22	1,375
61-62	8,251	5,808	2,796	8,000	1,947	25	1,535
62-63	9,149	6,165	3,082	9,542	2,682	35	1,650
63-64	10,293	7,134	4,016	11,053	2,716	50	1,742
64-65	11,921	8,350	4,816	15,260	2,750	50	1,867
65-66	13,542	8,612	5,613	18,644	2,748	244	2,099
66-67	15,597	9,647	6,394	25,275	6,769	379	2,434
67-68	18,645	9,893	7,353	43,019	182	1,029	2,759
68-69	22,976	11,868	11,387	55,859	203	1,631	2,800

1. Beginning in 1967-68, the federal government stopped its direct payments to the universities (except for small amounts for vocational education and social welfare) and reimbursed the province for 50 per cent of the cost of approved expenditures for post-secondary education.
2. Beginning in 1965-66 interest was shown as an income item. Prior to that, it had been netted out of the administrative departments expense, i.e., the interest earned was used to reduce expenditures rather than as an income item.



Source : Alberta Universities Commission, [illegible]

Table 6 - 41 provides a preliminary comparison of operating expenditures for selected universities, in 1967-68, as done by the Alberta Universities Commission.

Table 6 - 41

Operating Expenditures for Selected Universities 1967-68

($000) (Contra Accounts Eliminated)

	Alberta	Calgary	Lethbridge	Sask.	[illegible]	U.B.C.	[illegible]
Instructional Services:							
Faculties and Schools	24215	7962	923		11792	27739	
Indirect Instructional	1180	627	61				
Libraries	3013	1312	260		1048	3192	
Public Service (Extension)	[illegible]	[illegible]					
TOTAL INSTRUCTIONAL SERVICES	[illegible]	10126	1244	22079	12840	30937	[illegible]
Plant Operation and Maintenance	[illegible]	[illegible]	135	2411	2279	[illegible]	[illegible]
Student Services	[illegible]	[illegible]	25			[illegible]	[illegible]
Administration	[illegible]	[illegible]	[illegible]	[illegible]	2077	[illegible]	[illegible]
Miscellaneous	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
Ancillary Enterpirses (net)	132	195	26	(25)	25	7	[illegible]
Student Assistance				467		1666	[illegible]
Pension Provisions					793		[illegible]
Special Payments and Grants					[illegible]	[illegible]	[illegible]
TOTAL OPERATING EXPENDITURES	36094	13191	1692	[illegible]	24517	40266	[illegible]
Other Comparisons:							
Full-time Students	13027	[illegible]	638	13051	9389	18310	[illegible]
Part-time Students ÷ 4	1539	891	83	2432	1528	1600	[illegible]
Full-time Equivalent	14566	5651	721	15483	10916	19910	[illegible]
Expenditures/Full-time student	2770	2709	2652	[illegible]	2611	2200	[illegible]
Expenditures/Full-time equiv.	2477	2335	2346	1642	2245	2022	[illegible]
Full-time Faculty	835	[illegible]	65	[illegible]	?	?	[illegible]
Ratios - F.T.S./Faculty	15	[illegible]	9	[illegible]			
Provincial Grant/F.T.S.	2333	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Ontario Universities

ANALYSIS OF SELECTED UNIVERSITIES

	Carleton	McMaster	Queens	Toronto	Waterloo	Western
A. 1967-68 Actuals						
1. Full-Time Enrolment	5,199	5,226	5,917	18,811	5,607	7,[illegible]
2. FTE Enrolment	6,134	6,198	6,753	20,534	5,7[illegible]4	8,[illegible]70
3. Provincial Operating Grants						
(a) Formula Grant	$ 8,213,231	$11,122,797	$12,769,439	$44,897,264	$13,301,[illegible]	$14,755,[illegible]
(b) Supplementary Grant	0	1,400,000	0	6,197,362	1[illegible]9,000	[illegible]
(c) Total Grant	$ 8,213,231	$12,522,797	$12,769,439	$51,094,626	$13,[illegible]	$15,[illegible]
4. Formula Grant per Full-Time Student (A3a/A1)	$ 1,580	$ 2,128	$ 2,158	$ 2,387	$ 2,374	$ 1,[illegible]
5. Formula Grant per FTE Student (A3a/A2)	$ 1,339	$ 1,795	$ 1,891	$ 2,186	$ 2,330	$ 1,[illegible]
B. 1968-69 Estimates						
1. Full-Time Enrolment	5,730	5,658	6,359	20,237	6,072	7,161
2. FTE Enrolment	6,792	6,571	7,269	22,223	6,158	8,300
3. Provincial Operating Grant:						
(a) Formula Grant	$10,347,950	$13,681,600	$15,535,000	$53,080,650	$16,821,700	$17,692,950
(b) Supplementary Grant	0	2,150,000	0	5,715,000	40,000	725,000
(c) Total Grant	$10,347,950	$15,831,600	$15,535,000	$58,795,650	$16,861,700	$18,417,950
4. Formula Grant per Full-Time Student (B3a/B1)	$ 1,806	$ 2,418	$ 2,442	$ 2,623	$ 2,770	$ 2,472
5. Formula Grant per FTE Student (B3a/B2)	$ 1,524	$ 2,082	$ 2,137	$ 2,389	$ 2,7[illegible]	$ 2,1[illegible]

Table 6 - 42

The following nine pages of tables represent an attempt to compare the operations of universities throughout Canada. The unfortunate feature of these tables is that they are only comparable by province; comparisons of individual university operations are difficult to obtain. We did however make a crude attempt at comparing the operating revenues and expenditures for various selected universities; this may be found in APPENDIX "B".

General Expenditure (Estimated) (Current and Capital)

Fiscal Year ending [illegible]

(thousands of dollars)

No.	Expenditure by Function	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	56,199	8,282	58,520	107,830	786,110	845,321	86,600	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	31,581	11,584	57,080	31,548	314,880	584,821	54,715	40,959	155,660	[illegible]	[illegible]
[illegible]	Other	5,790	384	16,200	4,892	90,780	154,358	20,045	4,861	8,500	[illegible]	[illegible]
[illegible]	Total education	93,570	20,250	131,800	144,270	1,191,770	1,584,500	161,360	[illegible]	[illegible]	[illegible]	[illegible]

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1. Includes grants to reduce local school taxation 55,000

Source:-

DBS Weekly, October 16, 1970: "Provincial Government Finance, Revenue and Expenditure, [illegible], [illegible] - Advance information".

[illegible]

(thousands of dollars)

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
962-63	50,526	91,517	563	8,191	62,397	27,107	240,301	[illegible]
963-64	57,133	110,825	668	10,308	75,573	28,785	283,292	[illegible]
964-65	63,134	136,745	533	7,986	89,738	44,632	342,768	[illegible]
1965-66	73,125	183,213	577	9,030	110,624	49,780	426,349	[illegible]
1966-67	133,683	249,079	1,759	9,506	129,953	57,604	581,584	[illegible]
1967-68	83,759	435,513	1,812	10,228	144,490	64,780	740,582	[illegible]
1968-69*	97,973	600,311	2,590	10,826	171,004	77,853	960,557	[illegible]
1969-70*	114,599	827,469	3,701	11,459	202,383	93,564	1,253,175	[illegible]
1970-71*	134,046	1,140,583	5,289	12,129	239,520	112,445	1,644,012	[illegible]
1971-72*	156,794	1,572,180	7,559	12,839	283,472	135,136	2,167,980	[illegible]

* Projected by the Budget Bureau using straight-line methods and ignoring any major shifts that may occur in University revenues or expenditures.

Source: DHS - - - Mr. T. Collier

University Current Expenditures

Year	Instruction	Administration	Maintenance	Scholarships	Research	Other	[illegible]	[illegible]
2-63	150,207	17,006	28,447	2,818	30,738	14,799	[illegible]	[illegible]
3-64	177,485	19,848	32,576	3,566	36,796	19,660	[illegible]	[illegible]
1964-65	209,555	24,562	35,709	4,531	47,613	23,252	345,222	[illegible]
1965-66	262,051	33,121	43,964	9,039	61,480	22,677	432,332	[illegible]
1966-67	352,474	43,462	58,939	11,256	80,729	32,355	579,215	[illegible]
1967-68	452,983	55,245	73,573	10,266	104,218	42,225	738,510	[illegible]
1968-69*	565,549	70,006	89,185	13,732	133,107	52,511	924,090	[illegible]
1969-70*	706,088	88,712	108,110	18,368	170,004	65,303	1,093,585	[illegible]
1970-71*	881,551	112,416	131,051	24,569	217,129	81,211	1,447,927	[illegible]
1971-72*	1,006,164	142,454	158,860	32,863	277,317	100,994	1,718,652	[illegible]

[illegible] Mr. T. Collier

Table 6 - 46

Indicators of Operating Expenditures (including Assisted Research)

classified by Province, 1966-67

		Prince Edward Island and Newfoundland	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskat-chewan	Alberta	British Columbia	[illegible]	[illegible]	[illegible]	[illegible]
		Indicators												
[illegible]	[illegible]	7,372	23,024	13,040	154,338	214,813	28,948	26,494	47,476	63,710	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	5,032	9,806	6,862	75,070	68,589	12,389	11,577	16,983	26,364	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] of student:														
[illegible]	[illegible]	814	1,243	1,057	1,119	1,646	1,106	1,365	1,669	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	109	164	133	109	212	92	128	212	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	126	171	139	197	226	129	121	147	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	154	244	229	229	309	206	224	285	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	1,465	2,348	1,900	2,056	3,132	2,337	2,289	2,796	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] previous [illegible]:														
[illegible]	[illegible]	23.0	3.7	7.7	11.5	16.3	11.9	8.1	15.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	54.9	32.4	24.7	24.8	41.1	31.6	28.4	35.7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] per Student	[illegible]	[illegible]	27.7	15.8	11.9	21.3	17.6	18.8	17.8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	%	47.5	66.7	64.4	69.5	66.6	62.3	62.3	70.4	[illegible]	[illegible]	–	–	–
centage universities cur- t expenditure is to:														
ersonal income	%	.84	1.70	1.27	1.27	1.15	1.30	1.27	1.34	[illegible]	[illegible]	–	–	–
otal education expend.	%	–	–	–	–	–	–	–	–	–	[illegible]	–	–	–
ational income	%	–	–	–	–	–	–	–	–	–	[illegible]	–	–	–
ross National Product	%	–	–	–	–	–	–	–	–	–	[illegible]	–	–	–

rce: DBS Catalogue No. 81-212 (1966-67)

[illegible] Expenditures (including Assisted Research)

classified by Province, 1967-68

		[illegible]	[illegible]	Nova Scotia	Bruns- wick	Quebec	Ontario	Manitoba	Saskat- chewan	Alberta	British Columbia	[illegible]	[illegible]	[illegible]	
[illegible] es	$'000	8,611	2,236	29,759	16,753	179,005	289,694	38,022	32,765	61,868	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	No.	4,473	1,369	10,501	7,927	78,382	79,353	13,426	12,714	19,688	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible] student:															
[illegible]	$	1,030	974	1,460	1,155	1,292	1,919	1,296	1,520	1,838	[illegible]	[illegible]		[illegible]	
[illegible]	$	143	117	195	156	134	262	109	163	243	[illegible]	[illegible]			
[illegible]	$	189	182	189	145	215	267	177	135	171	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible] ce	$	251	106	310	258	243	369	209	241	306	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	$	178	48	267	178	316	570	517	443	342	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	$	84	206	413	221	84	264	524	75	242	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible] res	$	1,925	1,633	2,834	2,113	2,284	3,651	2,832	2,577	3,142	[illegible]	[illegible]	[illegible]	[illegible]	
ase over previous															
in:															
l-time enrolment	%	14.9	20.2	7.1	15.5	4.4	15.7	8.4	9.8	15.9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
al expenditure	%	54.8	23.6	29.3	28.5	16.0	34.9	31.3	23.7	30.3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
penditure per student	%	34.7	2.8	20.7	11.2	11.1	16.6	26.2	12.6	12.4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
ries and wages as a tal operating ex- ture	%	52.7	65.4	66.2	62.5	69.8	63.0	58.7	59.1	67.7	[illegible]	[illegible]	–	–	–
[illegible] value of staff	[illegible]	[illegible]	1,462	19,695	10,469	124,662	162,491	22,326	19,364	41,855	[illegible]	[illegible]	–	–	–
[illegible] cur-															
[illegible] to:															
[illegible] (1968)	%	1.16	1.21	1.89	1.41	1.26	1.29	1.48	1.43	1.53	[illegible]	[illegible]			
[illegible] (1968)	$	744	185	1,575	1,184	14,263	22,394	2,577	2,291	4,036	[illegible]	[illegible]			

Indicators of Operating Expenditures (including Assisted Research)

classified by Province, 1968-69

		Province													
		Newfound-land	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskat-chewan	Alberta	[illegible]	[illegible]	[illegible]		
[illegible]	$'000	12,864	2,989	36,004	20,206	190,628	366,905	43,844	40,644	80,321	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	No.	4,782	1,555	11,905	8,961	64,361	92,589	15,099	13,699	24,722	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]:															
[illegible]	$	1,546	1,027	1,589	1,217	1,637	2,122	1,470	1,663	1,879	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	$	213	152	199	175	187	294	125	170	232	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	$	246	189	213	144	232	260	135	129	184	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	$	283	219	324	273	315	408	217	268	312	[illegible]	[illegible]	[illegible]	[illegible]	
Research	$	189	17	274	167	447	588	532	486	354	[illegible]	[illegible]	[illegible]	[illegible]	
Other	$	213	318	425	279	142	291	425	251	288	[illegible]	[illegible]	[illegible]	[illegible]	
Total expenditures	$	2,690	1,922	3,024	2,255	2,960	3,963	2,904	2,967	3,249	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]:															
[illegible]	%	6.9	13.6	13.4	13.0	-17.8	16.7	12.5	7.7	25.6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	%	49.4	33.7	21.0	20.6	6.5	26.7	15.3	24.0	29.8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	%	39.7	17.7	6.7	6.7	29.6	8.6	2.5	15.1	3.4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	$	6,766	2,051	22,623	12,975	130,113	241,276	27,661	23,684	55,026	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] as a % [illegible] operating ex-[illegible]	%	52.6	68.6	62.8	64.2	68.3	65.8	63.1	58.3	68.5	[illegible]	[illegible]	[illegible]	[illegible]	...

Source: DBS Catalogue No. 81-212
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Table 6 - 49

Sources of Operating Funds, classified by Province 1966-67

Source	[illegible]	[illegible]	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
				(Thousands of Dollars)					
Student fees	2,146	[illegible]	3,940	43,297	42,700	5,876	4,979	7,912	13,361
Governments:									
Federal	2,680	[illegible]	2,740	3,773	38,230	4,933	4,481	7,112	11,532
Provincial	1,435	[illegible]	3,246	60,229	88,512	11,552	12,271	27,090	26,291
Municipal	-		-	-	441	37	-	104	1,093
Corporations	-		42	1,251	136	38	12	50	640
Foundations	10	1	8	585	251	155	5	62	886
Religious Org.	152	9	194	11,982	2,489	390	521	355	231
Alumni	-		26	599	304	-	7	8	-
Other gifts	9	[illegible]	45	672	1,221	86	68	9	1,455
Endowments	7	[illegible]	305	3,230	2,925	133	43	23	259
Other income	202	[illegible]	200	4,318	5,425	1,203	1,363	762	1,367
Total	6,841	[illegible]	11,746	129,936	182,634	24,403	23,750	43,487	57,115
Ancillary enterprise (gross)	554	[illegible]	3,040	18,834	23,240	2,943	3,703	8,076	5,880
				(Percentages)					
Student fees	31.4	[illegible]	33.5	33.3	23.4	24.1	21.0	18.2	23.4
Governments:									
Federal	42.1	[illegible]	31.8	2.9	20.9	20.2	18.9	16.4	20.2
Provincial	21.0	[illegible]	27.6	46.4	48.4	47.3	51.7	62.3	46.0
Municipal	-	-	-	-	.2	.2	-	.2	1.9
Other	5.5	[illegible]	7.1	17.4	7.1	8.2	8.4	2.9	8.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ancillary enterprises (gross)	8.1	[illegible]	25.9	14.5	12.7	12.1	15.6	18.6	10.3

Source: DES Catalogue [illegible] (1966-67)

Sources of Operating Funds, classified by Province 1967-68

Source	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	[illegible]	[illegible]	[illegible]	[illegible]
					(Thousands of Dollars)								
Student fees	1,950	576	6,321	4,678	46,449	49,199	6,684	5,307	8,760	[illegible]	[illegible]	[illegible]	[illegible]
Governments:													
Federal	82	-	426	103	3,519	5,497	262	33	239	[illegible]	[illegible]	[illegible]	[illegible]
Provincial	5,549	1,211	16,169	9,483	81,144	176,419	21,781	18,114	43,869	[illegible]	[illegible]	[illegible]	[illegible]
Municipal	-	-	21	-	128	438	34	-	129	[illegible]	[illegible]	[illegible]	[illegible]
Corporations	-	-	68	13	1,151	156	87	-	13	[illegible]	[illegible]	[illegible]	[illegible]
Foundations	-	-	183	78	438	263	375	10	77	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	10	-	852	182	10,190	3,658	429	615	297	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	-	2	94	12	526	383	37	8	23	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	1	-	306	285	685	1,621	233	104	54	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	-	4	2,028	329	3,183	2,746	794	56	231	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	246	17	403	294	6,289	8,099	1,230	1,677	1,249	[illegible]	[illegible]	[illegible]	[illegible]
Total	7,838	1,810	26,871	15,457	153,702	248,479	31,346	25,924	54,941	[illegible]	[illegible]	[illegible]	[illegible]
Ancillary Ent. (Gross)	577	379	5,312	3,384	20,769	28,418	3,328	4,119	9,069	[illegible]	[illegible]	[illegible]	[illegible]
						(Percentages)							
Student fees	24.9	31.8	23.5	30.3	30.2	19.8	21.3	20.5	16.0	[illegible]	[illegible]	[illegible]	[illegible]
Governments:													
[illegible]	1.1	-	1.6	0.7	2.3	2.2	0.8	0.1	0.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	70.8	66.9	60.2	61.3	52.8	71.0	69.5	69.9	79.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	-	-	0.1	-	0.1	[illegible]	[illegible]	-	0.2	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	3.2	1.3	14.6	7.7	14.6	[illegible]	[illegible]	9.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	7.4	20.9	19.8	21.9	13.5	[illegible]	10.6	[illegible]	16.5	11.2	[illegible]	[illegible]	[illegible]

urce: DBS Catalogue No. 81-212
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[illegible] Province 1968-69

[illegible]	Newfound-land	[illegible]	[illegible]	[illegible] Brunswick	[illegible]	[illegible]	[illegible]	[illegible]	Alberta	British Columbia	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	–	[illegible]	56	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	11,734	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	–	–	[illegible]	–	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	330	[illegible]	[illegible]	[illegible]	93	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	–	–	–	–	–	–	–	–	–	–	–	–	–	–
[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	717	304	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	–	–	–	–	–	–	–	–	–	–	–	–	–	–
[illegible]	3	–	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	18.2	21.3	21.6	17.2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	2.7	–	1.5	0.3	3.0	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	74.7	70.4	61.0	62.1	59.2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	–	–	–	–	–	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	1.4	1.7	14.8	7.2	10.6	[illegible]	6.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	100.0	100.0	100.0	100.0	100.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Ancillary Ent. (Gross)	9.0	16.7	19.1	20.3	8.3	[illegible]	[illegible]	7.8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible] Catalogue No. [illegible]

CAPITAL EXPENDITURES

Capital expenditures registered a more rapid percentage increase during the past decade than did either operating expenditures or enrolments. This increase is directly attributable to those factors listed under operating expenditures, as well as, the following major causes:

(1) Rapidly increasing enrolment necessitated expansion of physical facilities, lecture rooms, libraries, laboratories, etc.
(2) Purchases of more land, equipment and service facilities.
(3) Replacement of older buildings, machinery and equipment.
(4) Rapid expansion of student residences.

The tables on capital income and expenditures which follow, are based on reports submitted by the institutions to DBS. Since, their fiscal years vary in many instances from governmental fiscal years specific problems of comparability may arise. The Dominion Bureau of Statistics has made no attempt to reconcile these differences and for this reason accounts of grants paid by the province may vary from those reported received by the universities.

There are several characteristics of capital income and expenditures which should be borne in mind when reviewing historical data.

(1) Capital expenditures are often "one shot" propositions and can fluctuate considerably from year to year. And the smaller the institution, the more pronounced are the fluctuations.
(2) Capital income can change drastically from year to year, reflecting the results of short term capital fund campaigns, universities' requests, and government policies.

In Ontario, capital assistance is based on the following percentages of approved costs:[10]

85% on first $20 million and 95% thereafter for:
    (i) Academic and related buildings and equipment.
    (ii) Dining, student union, and physical education buildings and equipment.
    (iii) Land purchases, utilities and site services

100% of all approved costs for:
    (i) Medical, dental and health science buildings, equipment, utilities and site services

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[10] Report on the Minister of University [illegible]

No support is given for the construction of stadia, related playing fields, ice rinks, and space for commercial purposes. Funds for the construction of residences is provided through the Ontario Student Housing Corporation by the Central Mortgage and Housing Corporation.

When a project is approved for capital assistance by the Ontario Minister of University Affairs, the amount approved is placed to the credit of the university concerned. The university then makes a monthly request for the funds required to meet the Government's share of construction. Upon receiving the advance, the university sells a thirty year debenture, at current interest rates, in the amount of the advance. The combined principal and interest payments due on the debentures sold by universities is provided through a Province of Ontario grant.

The Ontario government is also developing an interesting formula approach to capital funding. The interim calibration standards involved were those of space (130 net assignable square feet per eligible full-time student) and of cost ($55 per square foot of additional space required for capital projects and their related equipment). A share of the total province's space goal for each year is to be allocated to individual universities by assigning weights to the various categories of enrolment in a manner similar to the formula for operating grants, but calculated to reflect the differing space requirements of students in different disciplines, such as arts and engineering.

The Ontario formula does not however encompass health science facilities, nor projects representing replacements and renovations, land acquisition, and general services and site development. These are provided for under special funds.

We feel that the Alberta Universities Commission should be asked to investigate the feasibility of using a similar capital grant formula for our universities.

When reviewing the tables on capital income and expenditures, a number of things should be noted, they are:

(1) When comparing capital expenditure per student the "age" of the university often plays an important role.
eg: Simon Fraser has a greater capital expenditure per student than do most established universities.

(2) Growth rates, as a result of the many causes previously discussed, result in a greater need for capital funds.

(3) The Universities' of Alberta and Calgary appear comparable to other universities on matters of distribution of expenditures for land and buildings.

(4) Marked differences appear when comparing sources of capital funds. Alberta universities apparently depending much more heavily on provincial funds than do other universities.

(5) Disparities occur in the data for several reasons: differences in definitions; inconsistencies in annual reports; and conjectured data found in the reports of the universities.

(6) Capital expenditures per student for the University of Calgary are extremely high in comparison with other institutions.

In the "Second Edmonton University Cost Study", prepared by the Budget Bureau in the fall of 1969, the cost per net square foot was estimated to be $38.27 in 1972, and $40.72 in 1975, with an estimated requirement of 175 gross square feet per student.

"In 1967-1968 it cost $35.23 to construct and equip one net square foot of non-residential space in the Alberta Universities. The Department of Public Works estimate the proportion of labour costs in a typical university building was used and then this proportion was increased at a rate of 8% a year; the remaining proportion of cost is attributable mainly to materials and this proportion was inflated at the average rate of increase of the Price Index of Non-Residential Building Materials in order to project building costs to the year 1975-1976."

Year	Cost Per Net Square Foot
1967-68	$35.23
1968-69	35.97
1969-70	36.72
1970-71	37.49
1971-72	38.27
1972-73	39.07
1973-74	39.89
1974-75	40.72
1975-76	41.57

For the past few years the net to gross ratio for non-residential construction at Alberta universities has ranged from 0.55 to 0.63.

Source: Budget Bureau Second Edmonton University Cost Study.

The following four tables will provide basic comparable data on capital income and expenditures for Alberta universities and for each Province - [illegible] the years 1966-67 to 1968-69.

TABLE 6-52

ALBERTA UNIVERSITIES EXPENDITURES ON CAPITAL ACCOUNT IN '000

1966-67	Land, Bldgs. & Plant	Furnishing & Equipment	Library Books	Prov. Lab.	Total
Alberta	$16,211	$ 4,675	$ 870	$40	$21,796
Calgary	13,224	2,502	719	0	16,445
Lethbridge	0	5	0	0	5
Totals	$29,435	$ 7,182	$1,589	$40	$38,246
1967-68					
Alberta	$29,459	$ 6,459	$1,357	$51	$37,326
Calgary	14,681	3,199	692	0	18,572
Lethbridge	504	253	125	0	882
Totals	$44,644	$ 9,911	$2,174	$51	$56,780
1968-69					
Alberta	$18,161	$ 6,535	$1,151	$64	$25,911
Calgary	9,364	3,694	666	0	13,724
Lethbridge	148	318	224	0	690
Totals	$27,673	$10,547	$2,041	$64	$40,325

Annual Reports of the Alberta Universities Commission.

Capital Income and Expenditures, classified by Province, 1966-67

	Prince Edward Island and Newfoundland	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
					Provinces				
. at beginning of year $'000	3,618	2,126	2,672	3,490	28,024	184	7,985	2,319	[illegible]
					(Thousands of dollars)				
ncome									
[illegible]:									
[illegible]	262	5,335	11	457	796	445	228	-	[illegible]
[illegible]	-	2,367	2,484	26,946	103,675	3,893	3,090	37,922	[illegible]
[illegible]	-	-	-	-	448	-	-	24	[illegible]
[illegible]	63	796	741	1,186	4,390	384	47	-	[illegible]
[illegible]	-	13	819	414	226	495	121	2	[illegible]
[illegible]	-	567	287	728	5,501	1	968	108	[illegible]
[illegible]	-	134	803	147	3,262	-	9	1	-
[illegible]	[illegible]	599	499	2,171	2,690	56	46	30	[illegible]
[illegible]	[illegible]	176	68	281	987	1	126	-	[illegible]
[illegible]	[illegible]	790	70	4,554	6,013	-125	56	2,131	[illegible]
[illegible]	-	125	8	-7	601	-	23	-	[illegible]
[illegible]	1,275	10,902	5,790	36,877	128,589	5,150	4,714	40,218	[illegible]
[illegible]	1,196	9,543	3,499	5,107	22,435	5,377	8,050	1,094	[illegible]
[illegible]	2,471	20,445	9,289	41,984	151,024	10,527	12,764	41,312	[illegible]
[illegible]	6,089	22,571	11,961	45,474	179,048	10,711	20,749	43,631	[illegible]
Expenditure									
nd	-	794	105	2,162	10,802	-	366	95	[illegible]
.ildings and contents	2,578	19,913	12,782	34,572	133,747	9,398	13,797	41,213	[illegible]
Total (land, buildings & contents)	2,578	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
lance at end of year	3,511	1,864	-926	8,740	34,499	1,313	6,586	2,323	[illegible]
Grand total	6,089	22,571	11,961	45,474	179,048	10,711	20,749	43,631	[illegible]

Capital Income and Expenditures, classified by Province, 1967-68

	Newfound-land	Prince Edward Island	Nova Scotia	Bruns-wick	Quebec	Ontario	Manitoba	Saskat-chewan	Alberta	British Columbia
[illegible] at beg. of year $'000	4,332	-821	4,212	-701	14,859	33,291	1,313	6,594	2,019	1,544
					(Thousands of Dollars)					
[illegible]ncome										
[illegible]:										
[illegible]	17	-	958	40	5,401	4,539	101	1,712	2,272	2,524
[illegible]	580	-	2,669	11,839	34,191	114,815	5,356	4,090	46,121	9,287
[illegible]	-	-	-	-	-	440	-	-	500	394
[illegible]	113	-	686	925	2,831	4,021	23	794	-	2,781
[illegible]	-	-	69	1,232	2,024	143	5	10	-	910
[illegible]ations	-	-	338	-	100	429	7	975	245	[illegible]
[illegible]	-	-	103	169	168	191	-	78	-	-
[illegible]	50	154	133	1,512	2,500	3,819	6	69	46	4,189
[illegible] funds	6	-	23	48	666	1,301	1	96	-8	21
[illegible]ns. out	1,521	191	542	-569	6,204	11,504	74	-54	3,845	[illegible]
[illegible] on Cap. Assets	34	1	137	579	118	316	-	1	-	-
[illegible] above)	2,321	346	5,658	15,775	54,203	141,518	5,573	7,771	53,021	20,515
[illegible]ments)	339	1,853	18,767	-2,640	5,125	13,233	59	5,636	4,917	1,274
[illegible] loans)	2,660	2,199	24,425	13,135	59,328	154,751	5,632	13,407	57,938	21,789
[illegible]	6,992	1,378	28,637	12,434	74,187	188,042	6,945	20,001	59,957	23,333
[illegible]										
[illegible]	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]
ilding, Contents, Library	2,795	1,701	22,550	14,455	57,293	146,273	4,637	13,316	57,017	20,528
[illegible] expenditure	2,795	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
ance at end of year	4,197	-388	4,796	-2,611	12,601	32,179	2,308	6,320	2,424	1,[illegible]
Grand total	6,992	1,378	28,637	12,434	74,187	188,042	6,945	20,001	59,957	23,33[illegible]

rce: DBS Catalogue No. 81-212

TABL[illegible]

Capital Income and Expenditures, classified by Province, 1968-69

		Provinces								
		Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta
. at beg. of year	$,000	1,231	-781	7,031	-2,389	25,335	53,781	1,000	2,142	2,718
		(Thousands of Dollars)								
[illegible]										
[illegible] 1		11	-	2,597	1,961	1,535	10,911	-	880	135
[illegible]		-	175	2,060	8,186	19,480	158,136	9,302	12,520	39,121
[illegible]		-	-	-	-	-	461	-	-	-
[illegible]		-	-	-	-	-	..	-	-	-
[illegible]lizations		-	-	-	-	-	-	-	-	-
[illegible]		76	2	617	1,412	3,664	5,548	2	722	73
[illegible]		74	74	1,644	220	831	3,080	298	151	852
[illegible]		39	-	34	52	496	1,574	15	181	404
[illegible] assets		233	166	393	335	5,101	4,912	235	83	1,631
[illegible] assets		-	3	41	760	-	198	-	25	4
[illegible])		433	420	7,386	12,926	31,107	184,820	9,852	14,562	42,220
[illegible]		173	847	15,371	1,162	628	6,459	-442	62	1,120
[illegible] income, loans)		606	1,267	22,757	14,088	31,735	191,279	9,410	14,624	43,340
[illegible] total		1,837	486	29,788	11,699	57,070	245,060	10,410	16,766	46,058
[illegible]										
.nd										
[illegible]		-	33	347	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible], library		[illegible]	[illegible]	[illegible]	9,944	[illegible]	157,100	8,269	13,091	38,898
Total Capital expenditure		245	1,212	21,526	10,216	29,471	165,429	9,223	13,614	39,013
.her expenses out of Cap. funds		554	35	682	347	[illegible]	[illegible]	[illegible]	[illegible]	-
[illegible] Cap. funds		799	[illegible]	[illegible]	10,563	30,670	181,818	9,238	15,035	39,013
.lance at end of year		1,038	-761	7,580	1,136	26,400	63,242	1,172	1,731	7,045
Grand total		1,837	486	29,788	11,699	57,070	245,060	10,410	16,766	46,058

Section 7: Semester Systems

A report of this nature would seem incomplete if nothing was said about the growing popularity of semester systems. With this in mind, the Budget Bureau sought meaningful information from various Canadian universities who have a semester system or who we believed were actively considering the implementation of one. The result of our efforts was failure. What information we did obtain seemed deliberately vague, elusive and useless. This we believe only helps to illustrate that multi-million dollar public institutions are being run on incomplete, inadequate, and often non-existent data. It also illustrates, we believe, the need for more productive cooperation between Universities and between Provinces.

We feel confident that semester systems will eventually be found in operation in most educational systems . . . from elementary school to university. This is evidenced by the movement in the United States, Europe, and parts of Canada today.

Semester systems provide a number of advantages and disadvantages, depending on your point of view. Below is a list of some of the items worthy of consideration when thinking about semester systems (several points were drawn from communication with Simon Fraser University).

Advantages:

(1) Administrative flexibility.

(2) Greater use of physical plants and facilities.

(3) Students may carry on their education at their own pace.

(4) Semesters provide opportunities to individuals who are unable to attend university full-time.

(5) Greater flexibility in provision and selection of programs.

(6) Students who drop-out because of illness, finances, etc. do not necessarily lose an entire year, rather only one semester.

(7) Greater flexibility in the arrangement of sabbaticals, holidays, and research time.

(8) A greater number of students can be accommodated in a 12 month period.

Disadvantages:

(1) More complex and greater numbers of administrative problems arise.

(2) Frequency of registration.

(3) Long periods of planning will not exist in a semester system as they do in a regular university session.

(4) Difficulty in the general goverance of faculties and committees.

(5) Problems of working with a Students' Executive which frequently changes.

(6) Expense of more maintenance, teaching and administrative staff.

(7) Difficulties in predicting student enrolments.

These are but a few of the numerous advantages and disadvantages that arise in the use of a semester system; our only intention here, is to present an extremely brief portrayal of a few, more obvious considerations.

Section 8: Comparative Staff and Student Data

In this section we have attempted to calculate faculty to student ratios for the years 1964 to 1970. The information was taken from university Annual and Presidents' reports. The universities found in the table were selected on two bases:

(1) their data was more readily available than most other universities and

(2) they represent only the provinces of Alberta and Ontario; Ontario was selected because it is commonly believed that their universities are, by in large, more comparable with those in Alberta.

We attempted to calculate equivalent faculty to equivalent student ratios where possible, on the basis that three part-time students or faculty members is equivalent to one full-time student or faculty member. This is not an iron-clad formula, rather one which the Alberta Universities Commission has adopted in the past to calculate its equivalent ratios.

As always, caution must be exercised when interpreting this information too literally. Any knowledgeable and discerning university administrator could quite easily pick such ratios apart because of the many variations and interpretations which can be applied to such data. We do, however, express confidence in the over-all comparability of the data, and feel that it does provide valuable insight to university affairs.

The Universities Commission should be encouraged to pursue the improvement of equivalent ratios; and where possible, they should be encouraged to unite with other interested groups in formulating realistic and uniform information pertinent to university affairs.

TABLE 8-56 Compa[illegible]

	1964-65	196[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
# Professors	660	745	[illegible]	[illegible]	[illegible]	.
# Undergraduates	8,394	9,149	[illegible]	[illegible]	[illegible]	.
# Graduates & U.G.	9,334	10,274	[illegible]	[illegible]	[illegible]	.
Faculty/Student Ratio	14.14	13.79	[illegible]	[illegible]	[illegible]	
Faculty/Student Ratio (Equivalent) (All Alberta Universities)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.
[illegible]: # Professors	[illegible]	[illegible]	304	[illegible]	[illegible]	
# Undergraduates	[illegible]	[illegible]	3,740	[illegible]	[illegible]	[illegible]
# Graduates & U.G.	[illegible]	[illegible]	4,074	[illegible]	[illegible]	[illegible]
Faculty/Student Ratio	[illegible]	[illegible]	13.40	[illegible]	[illegible]	.
Faculty/Student Ratio (Equivalent)	-	--	..	-	-	.
[illegible]: # Professors	-	.	..	[illegible]	[illegible]	-
# Undergraduates	--	--	-	[illegible]	[illegible]	-
# Graduates & U.G.	--	-	--	[illegible]	[illegible]	-
Faculty/Student Ratio	-	.	--	[illegible]	[illegible]	-
Faculty/Student Ratio (Equivalent)	..	..	.	.	-	.
[illegible]: # Professors	[illegible]	[illegible]	219	[illegible]	[illegible]	.
# Undergraduates	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
# Graduates & U.G.	[illegible]	[illegible]	3,510	[illegible]	[illegible]	[illegible]
Faculty/Student Ratio	[illegible]	[illegible]	16.03	[illegible]	[illegible]	
Faculty/Student Ratio (Equivalent)	-	.	..	.	..	.
[illegible]: # Professors	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--
# Undergraduates	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
# Graduates & U.G.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Faculty/Student Ratio	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.
Faculty/Student Ratio (Equivalent)	-	--	--	[illegible]	[illegible]	.
# Professors	[illegible]	319	[illegible]	[illegible]	520	--
# Undergraduates	[illegible]	2,683	[illegible]	[illegible]	4,363	.
# Graduates & U.G.	[illegible]	3,293	[illegible]	[illegible]	5,240	[illegible]
Faculty/Student Ratio	[illegible]	10.32	[illegible]	[illegible]	10.08	.
Faculty/Student Ratio (Equivalent)	--	-	--	[illegible]	[illegible]	--
# Professors	[illegible]	365	[illegible]	[illegible]	[illegible]	.
# Undergraduates	[illegible]	4,120	[illegible]	[illegible]	[illegible]	--
# Graduates & U.G.	[illegible]	4,643	[illegible]	[illegible]	[illegible]	--
Faculty/Student Ratio	[illegible]	12.72	[illegible]	[illegible]	[illegible]	
Faculty/Student Ratio (Equivalent)	.	-	.	[illegible]	[illegible]	.
[illegible]: # Professors	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.
# Undergraduates	[illegible]	[illegible]	[illegible]	16,236	[illegible]	.
# Graduates & U.G.	[illegible]	[illegible]	[illegible]	19,493	[illegible]	.
[illegible]	[illegible]	.	[illegible]	12.02	[illegible]	
[illegible]						
[illegible]	.	..	.	[illegible]	[illegible]	.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.
[illegible]	.	--	--	[illegible]		

Universities

tern: # Professors	382	442	532	639	695(?	-
# Undergraduates	4,492	5,035	6,742	7,270	8,551	-
# Graduates & U.G.	5,274	5,882	7,697	8,299	9,612	-
Faculty/Student Ratio	13.81	13.31	14.47	12.99	13.94	-
Faculty/Student Ratio (Equivalent)	-	-	-	13.64	14.61	-
k: # Professors	77	124	223	312	471	-
# Undergraduates	784	1,453	2,540	3,509	5,575	-
# Graduates & U.G.	795	1,491	2,649	3,735	5,924	-
Faculty/Student Ratio	10.32	12.02	11.92	11.97	12.58	-
Faculty/Student Ratio (Equivalent)	-	-	-	16.17	16.12	-

Includes Main, Scarborough and Erindale

Conclusion

There is little indication that university expenditures will decline under the present educational convictions of our society. The people of Alberta have seen that education is crucial to both the proper development of our society, and the economic growth of our province and nation.

The escalation of university expenditures is receiving considerable attention from all quarters, laymen and experts alike are realigning programs in view of Alberta's financial capabilities. Collaboration among interested parties who are reviewing the operating requirements and procedures of universities has become most desirable, in an attempt to establish measures through which cost controls can be implemented.

It is hoped that this report has gone a short distance to assembling the mass of divergent data concerning "universities"; and that it has crystallized the need for more comparable, accurate, and current data!

APPENDIX "A"

Statistical D[illegible] of [illegible]
[illegible] Totals [illegible], 1966-67 (Courtesy: [illegible]
Secretary of State) (As [illegible] in [illegible])

Study Program	Number	Percentage
University Graduate Program	20,930	7.59
University Undergraduate Program	244,710	63.19
Nursing	22,138	5.72
Teacher Training	20,503	5.29
Other	70,503	18.21
Total	387,242	100.00
Sex		
Male	239,186	61.80
Female	147,846	38.20
Total	387,032	100.00
Marital Status		
Married	42,527	10.98
Not Married	344,716	89.02
Total	387,243	100.00
Study Program and Residence		
University Graduate		
At Home	4,421	28.29
Away	11,204	71.70
Total	15,626	99.99
University Undergraduate		
At Home	81,891	39.02
Away	127,945	60.97
Total	209,834	99.99
Study Program and Sex		
University Graduate		
Male	[illegible]	[illegible]
Female	7,1[illegible]	[illegible]
Total	29,3[illegible]	[illegible]
University Undergraduate		
Male	[illegible]	[illegible]
Female	[illegible]	[illegible]
Total	[illegible]	[illegible]

	Number	Percentage
Study Program and Independence Status		
University Graduate		
Married	12,883	44.20
Other	7,778	26.68
Dependent	8,489	[illegible]
Total	29,150	100.00
University Undergraduate		
Married Independent	23,092	9.49
Other Independent	26,366	10.84
Dependent	193,871	79.67
Total	[illegible]	100.00
Independent Status and Age		
Married Independent		
Under 18	41	0.10
18 - 20	2,385	5.64
21 - 24	15,103	35.73
25 - 29	14,484	34.27
Over 29	10,256	24.26
Total	42,269	100.00
Other Independent		
Under 18	130	0.30
18 - 20	683	1.58
21 - 24	27,285	62.92
25 - 29	[illegible]	22.18
Over 29	[illegible]	13.02
Total	43,363	100.00
Dependent		
Under 18	17,422	[illegible]
18 - 20	200,957	[illegible]
21 - 24	75,783	[illegible]
25 - 29	4,444	[illegible]
Over 29	709	[illegible]
Total	299,315	[illegible]
Total		
Under 18	[illegible]	[illegible]
18 - 20	[illegible]	[illegible]
21 - 24	[illegible]	[illegible]
25 - 29	[illegible]	[illegible]
Over 29	[illegible]	[illegible]
Total	[illegible]	[illegible]

APPENDIX "B"

Operating Revenues and Expenditures for Selected Universities

ity of Alberta - Revenue in $000

	64-65	%	[illegible]	%	67-68	%	68-69	%
v. Gov't.	18,485	67.8	24,955	64.3	43,019	83.4	55,897	80.9
. Gov't.	2,748	10.1	6,769	17.4	182	.4	203	.3
tion Fees	5,613	20.6	6,394	16.5	7,353	14.2	11,387	16.4
er	403	1.4	699	1.8	1,029	1.9	1,631	2.3
al	27,249	100	38,817	100	51,583	100	69,118	100
v. Grant / F-T Student	1,799		2,172		3,302		3,682	

ersity of Alberta - Expenditure[3] in $000

	64-65	%	65-66	%	66-67	%	67-68	%	68-69	%
ic[2]	14,396	80.1	17,455	79.2	22,437	79.9	28,4[illegible]	7[illegible].7	34,3[illegible]7	7[illegible].0
Maint.	2,093	11.6	2,613	11.8	3,146	11.2	3,981	10.7	4,781	11.0
ministration	566	3.1	792	3.5	1,001	3.5	1,404	3.8	1,936	4.4
er	899	5.0	1,178	5.3	1,488	5.3	2,397	6.6	2,399	5.5
	17,954	100	22,038	100	28,074	100	3[illegible]	99.8	4[illegible]	[illegible]
end./F-T Student	1,923		2,145		2,444		2,771		2,862	

versity of Calgary - Revenue in $000

	64-65	%	65-66	%	66-67	%	67-68	%	68-69	%
't. of Alberta							11,204	83.2	15,885	80.4
't. of Canada							45	.3	53	.3
dent Fees							2,043	15.2	3,462	17.5
er							173	1.3	365	1.8
al							13,465	100	19,765	100
. Grant / F-T Student							2.25		2.35	

versity of Calgary - Expenditure in $000

	64-65	%	65-66	%	66-67	%	67-68	%	68-69	%
ic[2]	3,094	72.3	4,549	72.5	7,082	72.7	9,9[illegible]	73.4	13,4[illegible]	7[illegible]
t Maint.	766	17.9	1,098	17.5	1,434	14.7	1,800	13.3	2,202	12.3
inistration	361	8.4	362	5.8	534	5.5	798	5.9	923	5.2
	57	1.3	262	4.2	693	7.1	992	7.4	1,3[illegible]	7.7
	4,278	100	6,271	100	9,743	100	13,4[illegible]	100	17,[illegible]	1[illegible]
l-Time udent	2,622		3,268		4,074		4,980		6,770	
nd./F-T dent	1,654		1,919		2,391		2,709		2,6[illegible]	

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ludes faculties and schools, Indirect instructional expend., libraries.

the years before 1966-67, direct expenditures pertaining to what is now University of Calgary have been omitted.

versity of Lethbridge - Revenue in $000

	67-68	%	68-69	%
iversities Com.	1,434		2,674	82.0
dent Fees			530	16.2
her			58	1.8
tal	1,698		3,262	100
ov. Grant/F-T Student	2,248		2,611	

iversity of Lethbridge - Expenditure in $000

	67-68	%	68-69	%
Academic[2]	1,244	72.9	2,203	74.2
Plant Maint.	20	1.2	51	1.7
Administration	159	9.3	309	10.4
Other	283	16.6	405	13.6
Total	1,706	100	2,968	100
Expend./F-T Student	2,674		2,898	

iversity of Toronto - Revenue in $000

	64-65	%	65-66	%	66-67	%	67-68	%	68-69	%
. Gov't.	N/A		N/A		27,356	42.5	[illegible]	60.3	64,500	66.1
. Gov't.					8,959	14.3	4,096	4.9		
dent Fees					8,774	14.1	9,799	11.8	10,885	11.1
search					10,052	16.0	13,310	16.0	16,146	16.6
cilliary					1,224	2.0	1,401	1.7		
her					6,287	10.0	3,651	4.3	6,094	6.2
tal					62,652	100	83,060	100	97,625	100
ov. Gov't. Grant/F-T Student					1,504		2,543			

iversity of Toronto - Expenditure in $000

	64-65	%	65-66	%	66-67	%	67-68	%	68-69	%
demic	N/A		N/A		35,658	59.6		55.7		
ntenance					5,458	9.1		9.2		
inistration					2,074	3.4		3.5		
cilliary Ent.					1,251	2.0		1.7		
her					15,288	25.5				
t					59,729	100		100		

enditure / F-T Student

iversity of Saskatchewan - Revenue

	64-65	%	65-66	%	66-67	%	67-68	%	68-69	%
Gov't.	7,816	41.9	9,594	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	21,000	51.3
Gov't.	1,708	9.1	1,789	7.9	4,094	13.5		0	245	0.6
dent Fees	3,244	17.4	3,787	16.9	4,538	15.0	4,881	14.5	6,821	16.7
earch	(	(	(	(	4,342	14.4	5,635	16.7	(	
illiary	(	(	(	(						
Ent.[1]	(5,903	(31.6	(7,239	(32.4	3,566	11.8	3,863	11.4	(12,875	31.4
er	(	(	(	(	1,815	6.0	2,989	8.8	(	
	18,671	100	22,409	100	30,231	100	[illegible]	100	[illegible]	[illegible]

v. Grant/F-T Student

iversity of Saskatchewan - Expenditure

	64-65	%	65-66	%	66-67	%	67-68	%	68-69	%
ic	10,453	56.9	12,851	57.2	16,360	57.1	[illegible]	58.1	[illegible]	
. Maint.	1,384	7.5	1,754	7.8	2,410	8.4	2,911	8.3	[illegible]	
inistration	659	3.6	834	3.7	1,105	3.9	1,368	3.9	1,627	
earch	2,949	16.1	3,448	15.3	4,342	15.2	5,635	16.1	6,651	
illiary Ent.[1]	2,460	13.4	2,973	13.3	3,708	13.0	3,838	11.0	4,194	
er	445	2.5	599	2.7	716	2.5	871	2.5	1,179	
al	18,350	100	22,469	100	28,641	100	34,922	100	40,764	

enditure / F-T Student

iversity of Manitoba - Revenue

	64-65	%	65-66	%	66-67	%	67-68	%	68-69	%
v. Grant	6,906	49.8	-	-	10,121	47.6	18,566	67.6	22,853	71.3
't of Canada	1,782	12.8	-	-	3,764	17.7	243	0.8		
dents Fees	2,567	18.5	-	-	4,114	19.3	4,636	16.8	5,608	17.5
illiary Ent[1]	1,864	13.4	-	-	2,425	11.4	2,842	10.3	-	-
er	740	5.3	-	-	818	3.8	1,151	4.1	3,560	11.1
al	13,859	99.8	16,308	-	21,242	99.8	27,439	99.6	32,021	99.9

v. Grant/F-T Student 1.978

iversity of Manitoba - Expenditure

	64-65	%	65-66	%	66-67	%	67-68	%	68-69	%
c	6,772	48.9	8,077	49.5	10,515	49.3	12,256	44.5	17,757	55.0
[4]	1,042	7.5	1,553	9.5	1,814	8.5	2,299	8.3	3,124	9.6
	1,189	8.5	1,441	8.8	2,020	9.4	2,677	9.7	3,087	9.5
iary Ent.	1,598	11.5	1,905	11.6	2,146	10.0	1,194	4.3	2,712	8.4
	3,241	23.4	3,317	20.3	4,812	22.5	9,102	33.0	5,577	17.2
	13,842	99.8	16,293	99.7	21,307	99.7	[illegible]	99.8	32,257	99.7

. /F-T Student 2.933 3.029

des Academic as well as Business administration expenditure

on Fraser - Revenue in $000

	64-65	%	65-66	%	66-67	%	67-68	%	68-69	
v. Grant							11,649	78		
dent Fees							2,335	16		
earch							702	5		
er							165	1		
al							14,851	100		

v. Grant /F-T Student

on Fraser - Expenditure in $000

	64-65	%	65-66	%	66-67	%	67-68	%	68-69	%
demic							8,803	59		
int.							1,849	13		
in.							1,142	8		
earch							787	5		
er							2,254	15		
al							14,835	100		

pend. /F-T Student

rleton University - Revenue $000

	64-65	%	65-66	%	66-67	%	67-68	%	68-69	%
v. Grant	1,802	39.7	2,775	46.7	3,600	42.7	8,213	61.8	11,453	62.8
deral Grant	681	15.0	676	11.4	1,596	19.0	106	.8	320	1.8
dent Fees	1,723	37.9	1,975	33.2	2,511	29.8	3,152	23.7	3,723	20.4
search	224	4.9	392	6.6	640	7.6	752	5.7	1,439	7.9
er	112	2.5	121	2.0	77	.9	1,061	8.0	1,625	8.9
al	4,542	100.0	5,939	100.0	8,424	100.0	13,284	100.0	18,240	100.0
v. Gr. /F-T dent	.727		.904		.967		1.590		1.938	

rleton University - Expenditure $000

	64-65	%	65-66	%	66-67	%	67-68	%	68-69	%
demic	3,234	69.8	4,173	68.2	5,827	69.1	7,422	55.6	9,533	53.7
intenance	509	11.0	673	11.0	893	10.6	1,526	11.4	1,833	10.3
inistration	353	7.6	510	8.3	677	8.0	935	7.0	1,192	6.7
s ch	224	4.8	392	6.4	640	7.6	752	5.6	1,439	8.1
	315	6.8	372	6.1	394	4.7	2,726	20.4	3,751	21.1
	4,635	100.0	6,120	100.0	8,436	100.0	13,361	100.0	17,748	100.0
. /F-T	1.869		1.995		2.265		2.586		3.000	

ill - Revenue in $000

	64-65	%	65-66	%	66-67	%	67-68	%	68-69	%
v. Grant	7,101[6]	24.1	7,855	22.3	10,264	25.6	14,986	32.3	-	-
't of Can.	4,944[6]	16.8	6,751[6]	19.2	8,369	20.9	9,195	19.8	-	-
dents Fees	5,901	20.1	7,412	21.1	8,342	20.8	8,935	19.2	-	-
search (Other)	2,910	9.9	3,993	11.3	4,547	11.3	4,093	8.8	-	-
illiary Ent[1]	3,039	10.3	-	-	3,341	8.3	3,798	8.1	-	-
her	5,453	18.5	-	-	5,112	12.7	5,376	11.5	-	-
al	29,348	99.7	35,097	-	39,975	99.6	46,383	99.7	-	-

ill - Expenditure in $000

	64-65	%	65-66	%	66-67	%	67-68	%	68-69	%
demic	13,476	46.7	15,586	44.4	18,778	45.5	22,214	47.7	-	-
intenance	2,252	7.8	2,855	8.1	3,470	8.4	4,137	8.8	-	-
earch	8,017	27.8	10,894	31.0	13,111	31.8	13,524	29.0	-	-
inistration[1]	949	3.2	1,142	3.2	1,284	3.1	1,605	3.4	-	-
illiary Ent[1]	3,188	11.0	3,502	9.9	3,717	9.0	4,063	8.7	-	-
her	929	3.2	1,118	3.1	867	2.1	956	2.0	-	-
al	28,811	99.7	35,097	99.7	41,227	99.9	46,499	99.6	-	-
v. Grant /F-T Student										
end. /F-T Student										

stern University - Revenue

	64-65	%	65-66	%	66-67	%	67-68	%	68-69	%
v. Gov't	4,167	35.4	5,860	34.7	7,947	34.1	15,709	58.1	20,729	60.3
dent Fees	3,367	28.7	3,714	22.0	4,185	17.9	4,288	15.9	5,260	15.3
search Funds	943	8.0	3,172	18.8	3,874	16.6	5,249	19.4	5,821	17.0
't of Can.	2,578	21.9	1,434	8.5	3,510	15.0	-	-	-	-
her	692	5.8	2,668	15.8	3,777	16.2	1,771	6.5	2,512	7.3
l	11,747	100.0	16,848	100.0	23,293	100.0	27,017	100.0	34,322	100.0

stern University - Expenditure

	64-65	%	65-66	%	66-67	%	67-68	%	68-69	%
cademic	7,357	64.0	9,148	62.6	12,735	64.8	17,723	66.1	21,739	66.7
intenance	906	7.8	1,273	8.7	1,659	8.5	2,157	8.0	2,805	8.6
inistration	407	3.5	442	3.0	590	3.0	844	3.2	1,117	3.4
search	2,213	19.2	3,172	21.7	3,874	19.7	5,249	19.6	5,821	17.9
ther	601	5.2	590	4.0	767	3.9	839	3.1	1,109	3.4
tal	11,484	100.0	14,625	100.0	19,635	100.0	26,812	100.0	32,582	100.0
. Grant /F-T Student	.79		.996		1.030		1.885		2.44	
. /F-T Student	2.178		2.486		2.544		3.219		3.819	

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illiary Enterprises - includes athletics and health services, dining halls and residences, University bookstores

's research grants

ersity of British Columbia - Revenue

	64-65	%	65-66	%	66-67	%	67-68	%	68-69	
Gov't.	11,210	39.7	12,894	37.6	13,920	33.6	26,424	53.6	-	-
t of Can.	6,235	22.1	2,603	7.6	6,913	16.7	-	-	-	-
ents Fees	6,624	23.5	8,503	24.7	8,646	20.9	9,073	18.4	-	-
earch	4,144	14.6	5,629	16.4	7,446	18.0	8,914	18.1	-	-
r			4,708	13.7	4,465	10.7	4,921	9.9	-	-
l	28,213	100.0 (99.9)	34,337	100.0	41,390	100.0 (99.9)	49,332	100.0	-	-

ersity of British Columbia - Expenditure

	64-65	%	65-66	%	66-67	%	67-68	%	68-69	%
emic	17,192	63.1	18,665	56.0	22,766	56.9	27,734	56.2	-	-
tenance	3,001	11.0	3,209	9.6	3,858	9.6	5,608	11.4	-	-
earch	4,685	17.2	5,414	16.2	6,761	16.9	8,605	17.4	-	-
inistration	1,070	3.9	1,210	3.6	1,280	3.2	1,420	2.9	-	-
er	1,286	4.7	4,776	14.3	5,311	13.2	5,813	11.8	-	-
al	27,234	100.0	33,274	100.0	39,976	100.0	49,180	99.7	-	-
. Grant / Student										
end. / Student										

en's - Revenue in $000

	64-65	%	65-66	%	66-67	%	67-68	%	68-69	%
. Gov't	3,696	41.6	4,830	47.2	6,027	45.4	12,780	74.6	16,535	77.4
't of Can.	1,127	12.6	1,145	11.2	2,694	20.2	-	-	-	-
dents Fees	2,952	33.2	3,236	31.6	3,513	26.4	3,909	22.8	4,312	20.2
er	1,103	12.4	1,012	9.8	1,039	7.8	434	2.5	496	2.3
al	8,878	99.8	10,223	99.8	13,273	99.8	17,123	99.9	21,343	99.9

n's - Expenditure in $000

	64-65	%	65-66	%	66-67	%	67-68	%	68-69	%
emic	6,790	77.2	8,265	80.8	10,606	79.9	13,663	79.7	17,176	80.7
tenance	1,142	12.9	1,189	11.6	1,351	10.1	1,789	10.4	1,966	9.2
tration	534	6.0	560	5.4	738	5.5	[illegible]	5.5	1,231	5.7
r	328	3.7	209	2.0	578	4.3	725	4.2	904	4.2
	8,794	99.8	10,223	99.8	13,273	99.8	17,123	99.8	21,277	99.8
Grant/F-T	.917		1.040		1.180		2.211		2.919	
ture/F-T	2.183		2.202		2.595		2.962		3.756	

: Annual Reports of Universities and Representative Bodies

APPENDIX "C"

Miscellaneous Operating and Capital Data, Etc. for [illegible]

I. Alberta Universities: Net Assignable Square Footage (Total thousands of sq. ft).

	U of A	U of C	U of L	Total	Sq. Ft./Student
1966-67	1,618.0	581.0	-	2,199.0	141
1967-68	1,931.5	706.0	81.0	2,723.9	146
1968-69	2,072.7	806.2	98.7	2,977.6	130

Note: Residential space omitted

Source: Universities Commission Annual Report

II. Alberta Universities: Operating Costs per Full-time Student (Actual)

	U of A	U of C	U of L	Total	% Increase
1966-67	$2,444	$2,372	$ -	$2,434	16.0
1967-68	2,773	2,709	2,652	2,759	13.4
1968-69	2,862	2,648	2,882	2,800	1.5

Source: Universities Commission Annual Report

III. Alberta Universities: Operating Expenditures ($000)

	U of A	U of C	U of L	Total*	% Increase
1965-66	$11,489	$ 4,108	$ -	$28,425	27.7
1966-67	28,074	9,743	27	37,962	33.6
1967-68	36,121	13,491	1,692	51,448	35.5
1968-69	43,453	17,929	2,951	64,333	25.0

*Adjusted figures

Source: Universities Commission Annual Report

IV. Alberta Universities: Number of Courses Offere

	Regular Session	Summer Session	Evening
1965-66	2,102	245	91
1966-67	1,943	261	107
1967-68	2,282	286	123
1968-69	2,538	326	154

Source: Universities Commission Annual Report

V. Alberta Universities: Full-time student/Full-time faculty Ratios

	[illegible]	[illegible]	[illegible]	[illegible]
1965-66	986	1,440	1: 9.7	1:13.7
1966-67	1,148	1,692	1: 9.5	1:13.6
1967-68	1,385	2,018	1: 9.3	1:13.5
1968-69	1,651	2,405	1:10.5	1:13.9

Source: Universities Commission Annual Report

Notes: Data applies to total Alberta University System

: F-T-F is Full-Time Faculty

: P-T-F is Part-Time Faculty

: FTEF is Full-Time Equivalent Faculty, where one full-time equals three part-time instructors.

: FTES is Full-Time Equivalent Students, where one full-time equals three part-time students.

: FTS is Full-Time Student

VI. Alberta Universities: Sources of Operating Income ($000)

	Fees	Prov. Grant	Fed. Grant	Other Revenues	Net Op. Expend. per F-T student
1958-59	$ 1,488	$ 3,100	$1,745	$ 15	$1,100
1959-60	1,772	3,947	1,818	18	1,275
1960-61	2,049	6,000	1,876	22	1,375
1961-62	2,796	8,000	1,947	25	1,535
1962-63	3,082	9,542	2,682	35	1,650
1963-64	4,016	11,053	2,716	50	1,742
1964-65	4,816	15,260	2,750	50	1,867
1965-66	5,613	18,644	2,748	244	2,099
1966-67	6,394	25,275	6,769	379	2,434
1967-68	7,353	43,019	182*	1,029	2,759
1968-69	11,387	55,859	203*	1,631	2,800

* 50% shareable Post Secondary

Source: Universities Commission Annual Report